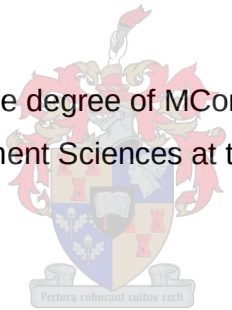
THE INFLUENCE OF FEAR APPEAL APPROACHES AND PERCEIVED RISK ON GENERATION Y CONSUMERS' PROTECTION MOTIVATION

Stephanie Bührer



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Date:

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ABSTRACT

Statement-based fear appeals have been used widely in social marketing in an attempt to change undesirable human behaviour. Despite the extensive use of this approach, fear appeal effectiveness has often been called into question given the defensive reactions that fear-based messages may arouse. To reduce the occurrence of these defensive mechanisms, a new fear appeal approach, which has recently demonstrated its success in increasing risk perceptions and reducing short-term smoking behaviour, has been suggested: the use of question-based warnings. Considering the recent success of this approach in the realm of cigarette smoking, this study extended the use of question-based warnings to a different context, namely drinking-and-driving. Moreover, literature pertaining to the different types of perceived risks, and which is most effective in altering males' and females' protection motivation, has resulted in contrasting results. Consequently, this study wanted to address this gap in the literature.

Against this background, the primary objectives of this study were to investigate whether different fear appeal approaches (i.e. question- and statement-based warnings), different types of perceived risk (i.e. physical and social risks) and gender, as well as the combined interaction between these variables, would influence generation Y consumers' protection motivation differently. Secondary objectives included investigating the impact of these variables on each component of the Protection Motivation Theory (PMT) Model; that is perceived vulnerability, severity, fear, response efficacy, self-efficacy and behavioural intent.

A four-group, post-test only experiment was conducted, with a total sample of 1203 respondents. A convenience sampling procedure was used. The results indicated that different fear appeal approaches did not influence generation Y consumers' protection motivation differently, while the opposite was found for different types of perceived risk and gender.

Based on these results, further research should be conducted to investigate the effectiveness of alternate fear appeal approaches. Additionally, while physical risks were found to be more effective than social risks in altering consumers' protection motivation, further research should be conducted to investigate which risk is more effective for the different genders. Finally, gender was shown to be an important factor in the perceived effectiveness of drinking-and-driving fear appeals.

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On the whole, three points should be taken away from this study. Firstly, given the relative ineffectiveness of both question- and statement-based warnings, either approach can be used in social marketing. However, where an anti-drinking-and-driving campaign wants to overcome the negative effects that overexposure and desensitisation can have on its effectiveness, question-based warnings should be used. Secondly, until such time as a more effective alternative has been found, anti-drinking-and-driving campaigns should continue to make use of physical risks. Finally, gender should always be an important consideration in both the design and implementation of a road-based social marketing campaign.

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OPSOMMING

Stelling-gebaseerde vreesberoepe is reeds wyd in sosiale bemarking gebruik om ongewenste gedrag te verander. Ten spyte van die uitgebreide gebruik van hierdie benadering, word die effektiwiteit van vreesberoepe gereeld bevraagteken as gevolg van die verdedigende reaksies wat baie vrees-gebaseerde boodskappe wek. Om die voorkoms van hierdie verdedigende meganismes te verminder, word ‘n nuwe vreesberoep-benadering, wat ook reeds sukses met die verhoging van risikopersepsies en die vermindering van korttermyn-rookgedrag gedemonstreer het, voorgestel: die gebruik van vraag-gebaseerde waarskuwings. Gegewe die sukses van hierdie benadering in die area van sigaretrook, het hierdie studie probeer om die gebruik van vraag-gebaseerde waarskuwings uit te brei na ‘n ander konteks, naamlik drink-en-bestuur. Verder het die literatuur met betrekking tot die verskillende tipes waargenome risiko, en watter risiko die effektiefste is in die verandering van mans en vroue se beskermingsmotivering, gelei tot kontrasterende resultate. Gevolglik wou hierdie studie dié gaping in die literatuur aanspreek.

Dus ondersoek die primêre doelwitte van hierdie studie of verskillende vreesberoep-benaderings (naamlik vraag- en stelling-gebaseerde waarskuwings), verskillende tipes waargenome risiko (naamlik fisiese en sosiale risiko's) en geslag, asook die gekombineerde interaksie tussen hierdie veranderlikes, verbruikers se beskermingsmotivering verskillend beïnvloed. Die sekondêre doelwitte het ingesluit om die impak van hierdie veranderlikes op elke komponent van die Beskermingsmotiveringsteorie-model (BMT) te ondersoek; dit wil sê waargenome kwesbaarheid, erns, vrees, reaksie-doeltreffendheid, selfdoeltreffendheid en gedragsvoorneme.

‘n Vier-groep, post-toets-alleenlike eksperiment is uitgevoer, met ‘n totale streekproef van 1203 respondente. Gerieflikheidsteekproefneming is benut. Die resultate het aangedui dat verskillende vreesberoep-benaderings nie generasie Y verbruikers se beskermingsmotivering verskillend beïnvloed nie, terwyl die teenoorgestelde gevind is vir verskillende tipes waargenome risiko en geslag.

Gebaseer op hierdie resultate behoort toekomstige navorsing gedoen te word om die effektiwiteit van alternatiewe vreesberoep-benaderings te ondersoek. Aangesien fisiese risiko bevind is om meer effektief te wees as sosiale risiko in die verandering van verbruikers se beskermingsmotivering, moet verdere navorsing ook gedoen word om te

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ondersoek watter risiko meer effektief is vir die verskillende geslagte. Laastens het geslag na vore gekom as 'n belangrike faktor in die waargenome doeltreffendheid van drink-en-bestuur-vreesberoepe.

In geheel kan drie punte van hierdie studie weggeneem word. Eerstens, gegewe die relatiewe oneffektiwiteit van beide vraag- en stelling-gebaseerde vreesberoepe, kan beide benaderings gebruik word in sosiale bemarking. Waar ’n nie-drink-en-bestuur veldtog wel die negatiewe effekte van oormatige blootstelling en desensitisering wil voorkom, moet vraag-gebaseerde waarskuwings gebruik word. Tweedens, tot en met die tyd waar ’n meer effektiewe alternatief gevind is, moet nie-drink-en-bestuur veldtogte van fisiese risiko’s gebruik maak. Laastens moet geslag altyd in oorweging geneem word tydens die ontwerp en implementering van pad-gebaseerde sosiale bemarkingveldtog.

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KEYWORDS

Fear Appeals

Perceived Risk

Protection Motivation

Question-based Warnings

Social Marketing

Statement-based Warnings

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"Challenges are what makes life interesting, and overcoming them is what makes life meaningful" – Joshua J. Marine

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CHAPTER 1

INTRODUCTION AND OVERVIEW

1.1 INTRODUCTION

Threatening communication has been used by marketers as a means of persuasion for over sixty years (Janis and Feshbach, 1953:78; Ruiter, Kessels, Peters and Kok, 2014:63). Otherwise known as fear appeals, this method of influence focuses on the use of fear in an attempt to create awareness and modify socially undesirable behaviour such as smoking, drinking-and-driving and the spread of HIV (Hastings, Stead and Webb, 2004:961; Brandhouse, 2009; Avert, 2012; SAB, 2012). It is on this fear-based premise that many social marketing campaigns have been designed and implemented in an effort to alter deviant behaviour.

However, the effectiveness of fear-based appeals has been controversial as years of research have still not produced conclusive evidence to substantiate under which conditions this marketing approach will prove successful (Kohn, Goodstadt, Cook, Sheppard and Chan, 1982:462; O'Hegarty, Pederson, Nelson, Mowery, Gable and Wortley, 2006:467; Ruiter *et al*., 2014:68). Recent evidence has suggested that there are alternate types of fear approaches that should be investigated (Glock, Müller and Ritter, 2012:253; Müller, Ritter, Glock, Dijksterhuis, Engels and van Baaren, 2014:453), as these approaches could be more effective in realising the goals of fear appeals: behavioural change intentions.

This study is dedicated to adopting a taut theoretical approach by investigating the potential role of social marketing approaches in modifying deviant consumer behaviour. The following sections elaborate on the background and core concepts of the study, the identified problem statement and research objectives as well as the study's methodology and orientation.

1.2 SOCIAL MARKETING

Social marketing can be defined as the design, implementation and control of programs that aspire to effect the acceptability of social ideas (Kotler and Zaltman, 1971:5). This practice attempts to alter undesirable consumer behaviour, while encouraging desirable behaviour as so deemed by society, by using marketing

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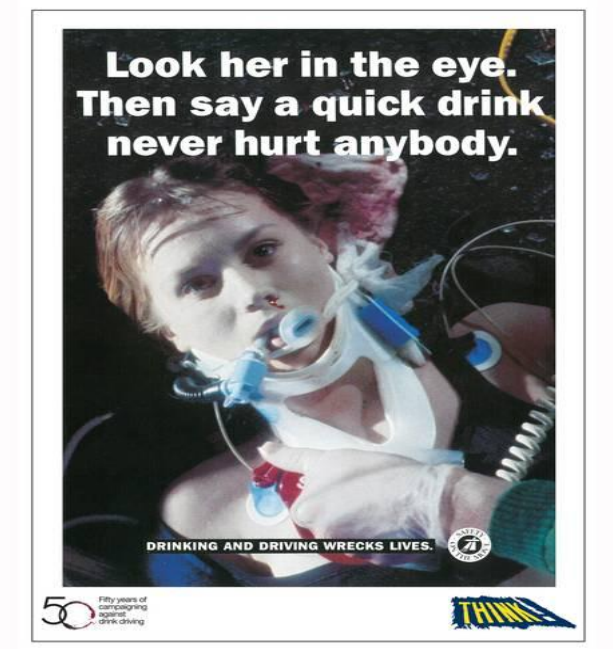
techniques (Dibb and Carrigan, 2013:1380). One such marketing technique is to use fear in social marketing campaigns to scare individuals into complying with a behaviour that is deemed socially desirable.

1.3 FEAR APPEALS

Fear is defined as an unpleasant emotional state in response to a potential threat (Ruiter *et al*., 2014:65). More specifically, fear appeals are persuasive messages designed to arouse fear in an effort to frighten consumers into altering their unacceptable behaviour (Morales, Wu and Fitzsimons, 2012:383). An example of a fear appeal message can be seen in Figure 1.1.

Figure 1.1: Example of Fear Appeal for Drinking-and-Driving



Source: Adapted from Usborne (2014)

Messages such as those shown in Figure 1.1 have been used extensively for the past sixty years in an attempt to alter undesirable behaviour such as drinking-and-driving (Janis and Feshbach, 1953:78; Ruiter *et al*., 2014:63). Several theoretical models have been developed to explain the relationship between fear arousal and behaviour change (Leventhal, 1971:1210; Rogers, 1975:93; Witte, 1992:333). One of these models, the Protection Motivation Theory (PMT), has received considerable attention.

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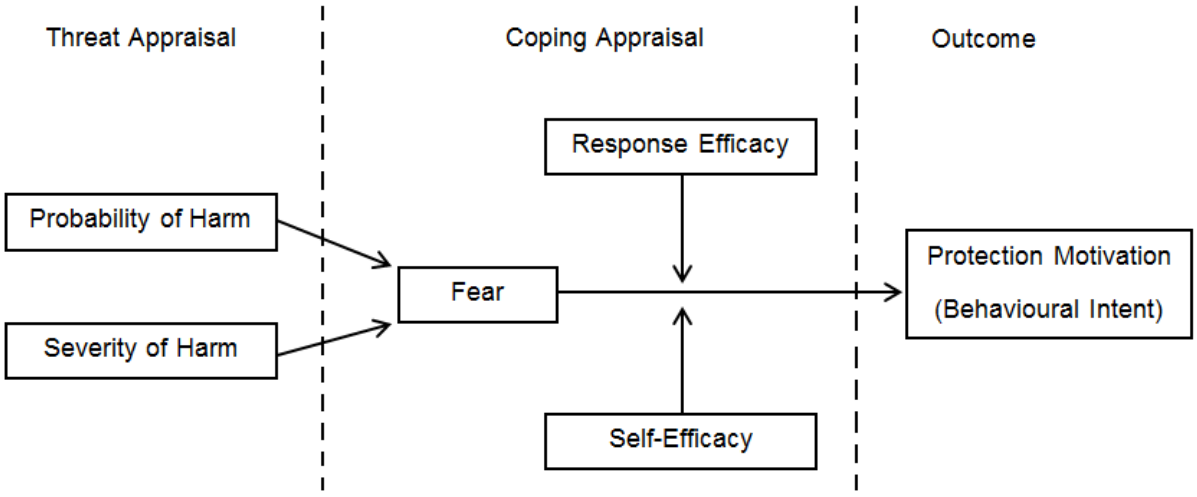
(a) Understanding Fear Appeals: Protection Motivation Theory

Introduced in 1975 (Rogers, 1975) and later modified, the PMT model comprises of two sequential processes: threat appraisal and coping appraisal (Maddux and Rogers, 1983:471; Tanner, Hunt and Eppright, 1991:37). The former measures the severity of and vulnerability to the threat, while the latter considers the response efficacy (i.e. the efficacy of the recommended coping response in eliminating the threat), as well as an individual's self-efficacy (i.e. their ability to carry out the coping response). The modified PMT model – henceforth referred to as the PMT model – and its processes are demonstrated in Figure 1.2.

The model shows that fear arousal is a necessary outcome of the threat appraisal process, as it initiates the secondary appraisal process: the coping response (Tanner *et al*., 1991:37). The components of the coping appraisal moderate the impact that fear has on behaviour.

Figure 1.2 The PMT Model



Source: Adapted from Arthur and Quester (2004:680)

More specifically, once an individual perceives their susceptibility to and the severity of the threat, provided they possess sufficient response efficacy and self-efficacy, protection motivation will be initiated (Arthur and Quester, 2004:673; Rogers, 1975:98). Protection motivation is a state in which an individual attempts to protect themselves from the current threat, opting to adopt the recommended coping response. In doing so, it is hoped that a behavioural change will occur (Rogers, 1975:98).

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Despite the widespread use of fear appeals and the implementation of the PMT, the effectiveness of fear appeals is still a point of contention.

1.3.1 Ineffective Nature of Fear Appeals

Many studies investigating the effects of fear appeals have reported findings of positive behavioural outcomes (Tay, 2002:198; Hammond, Fong, Mc Donald, Cameron and Brown, 2003:391; O'Hegarty *et al*., 2006:467), while others have suggested that the use of fear is ineffective in terms of behavioural change (Kohn *et al*., 1982:462; Glock *et al*., 2012:253; Lin, 2014).

Several studies investigating fear appeals have found that this method could produce unintended negative effects such as defensive reactions (Prevention First, 2008; van't Riet and Ruiter, 2013:S105). These defensive reactions include: (a) avoidance, which refers to the actions of escaping the threatening communication; (b) denial, otherwise known as the rejection of the message; (c) suppression, which is defined as inhibiting threatening thoughts or emotionally-charged behaviour; (d) cognitive dissonance, a state of discomfort when an individual simultaneously holds two conflicting mental representations; and (e) psychological reactance, which is aroused when an individual perceives their freedom as being restricted or removed and attempts to retrieve that freedom by means of behavioural defiance (Gross, 2002:281; Grandpre, Alvaro, Burgoon, Miller and Hall, 2003:350; Glock and Kneer, 2009:357; van't Riet and Ruiter, 2013:S105; Kessels, Ruiter, Wouters and Jansma, 2014:87; Shen, 2014:2).

These aforementioned negative outcomes reduce the effectiveness of threatening communications, since individuals perceive these messages as a psychological attack on their freedom (Müller, van Baaren, Ritter, Woud, Bergmann, Harakeh, Engels and Dijksterhuis, 2009:427; Shen, 2014:9). In an attempt to regain the freedom that is being threatened, they then continue to engage in the undesirable behaviour and in some instances partake in the behaviour to a greater extent than before exposure to the fear appeal (Ruiter, Abraham and Kok, 2001:615; Prevention First, 2008).

These defensive reactions clearly limit the success of fear appeals, thereby highlighting the necessity of finding more effective approaches to fear-based persuasive messages. In an attempt to overcome these negative effects of fear

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appeals while still conveying the intended messages effectively, different fear appeal approaches have been suggested.

1.3.2 Different Fear Appeal Approaches

Currently, fear appeals are often phrased in the form of statements, such as the one in Figure 1.1. However, recent research has pointed to the use of formulating fear appeal warnings as questions instead (Glock *et al.*, 2012:253; Müller *et al*., 2014:453).

Specifically, Glock *et al.* (2012:253) proposed that by reformulating fear appeal statements into questions, consumers would generate their own arguments against the negative behaviour in question. The argument is based on the premise that the likelihood that consumers would accept a message, is increased when the message is internally generated rather than being provided by an external source (Mussweiler and Neumann, 2000:198; Grandpre *et al*., 2003:362). Subsequently, the potential occurrence of unintended negative effects that may result from the use of fear appeal communication, may be avoided.

A further consideration that may help to reduce the negative effects of fear appeals is personal relevance. By developing their own argument, the consumer will determine the extent to which their argument is personally relevant. The relevance of a threat, in turn, mediates perceptions of risk and the level of fear that is aroused. In other words, question-based fear appeals allow a consumer to develop arguments that contain enough fear so that they perceive a threat, but this level of fear is not so severe that it results in defensive responses (Glock *et al.*, 2012:257; Müller *et al*., 2014:257).

Importantly, while only two studies have investigated the use of question-based fear appeals, their results have indicated significant positive effects on consumers' risk perceptions as well as on their short-term behaviour in the domain of smoking (Glock *et al.*, 2012:257; Müller *et al*., 2014:257-8). In light of the limited research that has been conducted on question-based warnings, this study hopes to contribute to this body of knowledge.

In both Glock *et al.* (2012) and Müller *et al*.'s (2014) studies, the importance of self-efficacy (i.e. an individual's perceived ability to implement the recommended coping

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response, thereby overcoming a threat) in fear appeals was highlighted. Despite the apparent significance of this construct, neither study investigated the impact that question-based warnings might have on an individual's self-efficacy.

Rather, the investigation of question-based warnings' effect on self-efficacy was advocated as an avenue for future research. Against this background, this study responds to Glock *et al.* (2012) and Müller *et al*.'s (2014) call for future research by analysing the impact that question-based warnings have on self-efficacy. However, self-efficacy does not exist in isolation. Instead, it forms part of a model for fear appeals, known as the Protection Motivation Theory (PMT).

The PMT model illustrates the factors and conditions that are required for a fear appeal to evoke behavioural change (Chung and Ahn, 2013:457). Furthermore, one of the PMT's components, self-efficacy, plays an integral role in how individuals respond to fear appeals, thereby making it an invaluable consideration in terms of any psychological change such as behavioural intent (Bandura, 1977:194-5; Manyiwa and Brennan, 2012:1421).

Taking these aforementioned considerations into account, a review of the fear appeal literature on question-based warnings reveals a limitation. To date, only two studies have focused on researching question-based warnings. More specifically, these two studies were limited to exploring increased risk perceptions and short-term behavioural change. Therefore, the effect of question-based warnings on the PMT model and its components has not yet been investigated. This study hopes to address this limitation.

Moreover, given that the PMT is an important model for investigating the impact of fear appeals, understanding the effect that question-based warnings might have on the components of the PMT, could help to enhance the effectiveness of fear appeals as a whole. Therefore, the primary purpose of this study is to assess this limitation in the literature by investigating the use of both question- and statement-based warnings to explore which fear appeal approach is more effective in terms of consumers' protection motivation behaviour.

Each of the PMT components plays an important role in shaping the relationship between fear arousal and behavioural change. However, in order for fear to be aroused there has to be some recognition of potential danger, otherwise known as

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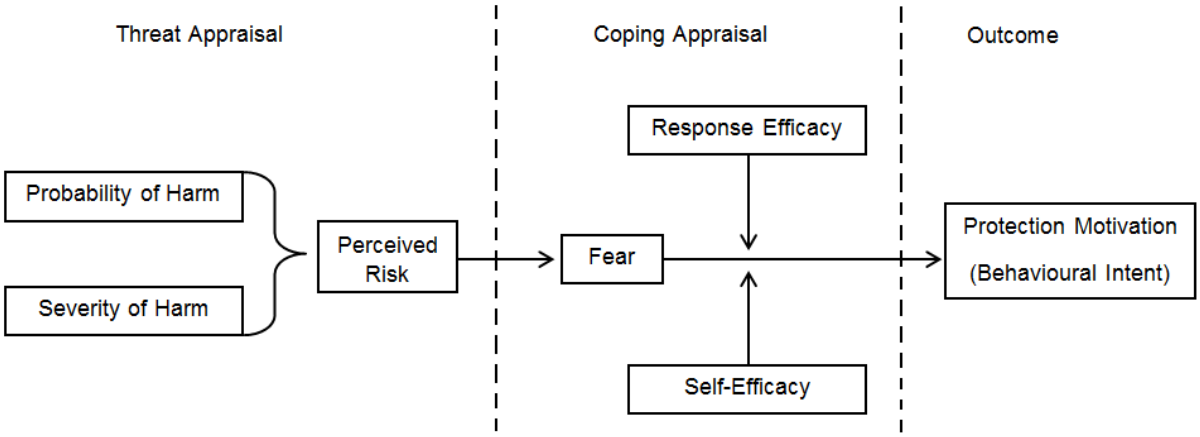
perceived risk (Öhman, 2008:710; Williams, 2012). The use of perceived risk to incite fear forms part of the foundation of fear-based marketing appeals (Glock and Kneer, 2009:359; Williams, 2012).

1.3.3 Perceived Risk

Risk can be defined as the probability that something of value could be lost (Dean, 2012:64). Perceived risk is thus an individual's perception of something of value which has the potential to be lost. This loss could take many forms such as physical injury, emotional strain as well as social humiliation to name but a few (Dean, 2012:64).

In the context of fear appeals, however, perceived risk has been defined in terms of an individual's perceptions of their vulnerability to and the severity of a potential threat, such as a car crash due to drinking-and-driving (Renner and Schwarzer, 2003:172; Terpstra, Zaalberg, de Boer and Botzen, 2014:1508). This definition directly links risk perceptions to the PMT model as demonstrated in Figure 1.3.

Figure 1.3 Perceived Risk in the PMT Model



Source: Adapted from Arthur and Quester (2004:680); Renner and Schwarzer (2003:172)

The first limitation identified in the fear appeal literature pertains to question-based warnings and the PMT model. Seeing as perceived risk has now been incorporated into the model, a further limitation in the literature can be identified. That is, despite perceived risk and its influence on the PMT having been analysed, the effect of

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perceived risk on question-based warnings and their combined impact on the PMT, have yet to be investigated.

While it is evident that perceived risk influences the threat appraisal process, one has to consider the different types of risk and the influence they might have on behavioural intent. Jacoby and Kaplan (1972) identified five types of risk: financial, performance, psychological, physical and social risks. A sixth risk type was later added, namely time risk (Stone and Grønhaug, 1993:41). It should be noted, however, that these risk types were described in respect of product or service categories, rather than in respect of fear appeals.

Given that fear appeals are used as a social marketing tool in an attempt to alter undesirable behaviour in terms of health risks, only those risks that could possibly facilitate behavioural change in terms of fear-arousing communications were considered in this study. Drawing on previous research regarding different perceived risks and fear appeals (Kohn *et al*., 1982:463; Smith and Stutts, 2003:160; Chung and Ahn, 2013:453), this study will investigate the differential impact of both physical risk – defined as the threat to one's physical body, health and life – and social risk – defined as the threat of social rejection or isolation – on consumers' protection motivation behaviour (Laroche, Toffoli, Zhang and Pons, 2001:303).

Investigating the different types of perceived risk in the domain of fear appeals serves two further purposes. In the first instance, earlier studies exploring the use of physical versus social risk and which is more effective, have yielded mixed results (Smith and Stutts, 2003:160). As a result, this study will contribute to this body of knowledge regarding which risk is deemed to be more effective in the realm of fear appeals.

Secondly, the theory of comparative optimism suggests that an individual perceives their own risk of a potential threat as lower than that of their peers, thereby lowering (or preventing) feelings of vulnerability (Ruthig, Chipperfield, Perry, Newall and Swift, 2007:346-7). This second consideration suggests that lowering perceptions of vulnerability could impact the effectiveness of fear appeals. Against this background, the current study will also investigate which type of risk is more effective in increasing an individual's perceptions of vulnerability, thereby negating the effect of comparative optimism and hopefully increasing the effectiveness of fear appeals.

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Taking the aforementioned limitations into consideration, this study will investigate the gaps in the literature in two ways. Firstly, given the fact that only two studies have been conducted on question-based warnings, the primary purpose of this study is to investigate the use of question- and statement-based warnings to explore which fear appeal approach is more effective. The secondary purpose of this study is to investigate the influence of physical or social risk in terms of each respective fear appeal approach and in doing so, strengthen the effectiveness of question-based warnings and fear appeal approaches in total. Ultimately this study hopes to contribute to the body of knowledge on fear appeals by investigating the use of different fear appeal approaches as well as perceived risks on consumers' protection motivation behaviour.

1.4 THE CONTEXT OF THE STUDY

Road safety is a major concern throughout the world and South Africa is no different. In fact, road traffic fatalities are amongst the main causes of death in South Africa (Peters, 2015a). Consequently, the South African government has chosen to use social marketing campaigns which focus on altering the deviant behaviour which leads to road fatalities. More specifically, emphasis has been placed on altering drinking-and-driving behaviour.

Despite these efforts, thousands die each year due to the concurrent consumption of alcohol and road use (Arrive Alive, 2014). It is in light of this evidence that many are calling for more effective road safety campaigns to prevent as many road-related, and specifically alcohol-and-road related, deaths as possible (Peters, 2015a). However, in order to design campaigns which can be effective in realising their goal (i.e. prevent drinking-and-driving), these campaigns need to be targeted at those individuals most at risk.

Research in South Africa has shown that individuals aged 15-39 years are most at risk in terms of drinking-and-driving (Chokotho, Matzopoulos and Myers, 2012; Sukhai and Seedat, 2013; Peters, 2015b). This age group, born between 1977 and 2000, is known as generation Y and is the group mostly affected by fatal road accidents. Despite the fact that these drivers comprise 24% of road fatalities, Peters (2015b) reported that generation Y individuals accounted for more than half of those mortalities.

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Further consideration should also be given to the role of gender in road fatalities, as statistics have shown that males within this age group are at a higher risk of becoming the victims of road fatalities than their female counterparts (Glendon and Cernecca, 2003:197; Sukhai and Seedat, 2013). During the South African festive period ranging from 1 December 2014 to 5 January 2015, males accounted for 75% of all road fatalities throughout the country (Peters, 2015b). This phenomenon can be attributed to the theory relating to an individual's propensity for risky behaviour, where males have been identified as the individuals that possess a stronger inclination towards participating in risky behaviour (Taubman-Ben-Ari, 2012:721). Risk propensity can be defined as the extent to which an individual is likely to engage in risky behaviour (Sitkin and Pablo, 1992:12). Many studies have indicated that risky driving behaviour strongly correlates with younger drivers throughout the world – typically aged 18-28 years (Cauberghe, De Pelsmacker, Janssens and Dens, 2009:277).

While generation Y consumers, and specifically males, are most at risk in terms of road fatalities, thereby making this group an ideal consideration for this study, they are further characterised by unique considerations which set them apart from other generations (Fromm, Vodicka, Butler and Swartz, 2013). Generation Y is considered to be individualistic, well-educated and group-oriented, with a strong sense of identity (McCrindle, 2003; Maciejewski, 2004:97; Valentine and Powers, 2013:598).

When considering generation Y's inclination of having a strong sense of identity, it stands to reason that any form of communication which threatens their sense of self and their freedom, will have a negative impact and be ineffective in delivering the intended message. Seeing that question-based warnings have been found to alleviate feelings of threat on an individual's freedom (Glock *et al*., 2012:257; Müller *et al*., 2014:257), investigating whether question-based warnings will have a significant influence on consumers' protection motivation among generation Y consumers, as opposed to statement-based warnings, is a pertinent aspect for this study.

Furthermore, despite this generation's tendency to celebrate their individuality and diversity, they still value group association and are strongly influenced by their peers (McCrindle, 2003). Therefore, investigating whether social risk will have a differential impact on consumers' protection motivation among generation Y consumers, in

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comparison to physical risk, is also relevant to the current study. Against this background, this study has identified the South African road safety situation and generation Y consumers, as the context on which to base a study of different fear appeal approaches and risk perceptions in warnings to influence this undesirable behaviour.

1.5 PROBLEM STATEMENT

Socially undesirable behaviour such as alcohol abuse is an unremitting problem for society (Hastings *et al*., 2004:961; Brandhouse, 2009; Avert, 2012; SAB, 2012). In South Africa, thousands of people die each year due to drinking-and-driving (SADD, 2013; Arrive Alive, 2014). The purpose of social marketing is to create campaigns that alter such undesirable behaviour by using techniques such as fear appeals.

Literature suggests that fear appeals, mediated by the effects of different perceived risks and the PMT's components, play an integral role in behaviour-change strategies (Witte, 1992:333; Arthur and Quester, 2004:673). However, empirical findings on the effectiveness of fear appeals have been largely inconclusive. Many studies have reported findings of fear-based messages leading to favourable changes in consumer behaviour (Tay, 2002:198; O'Hegarty *et al.,* 2006:467; Hammond *et al*., 2003:391), while other studies have found that fear-induced communications are ineffective (Kohn *et al*., 1982:462; Ruiter *et al.*, 2001:626; Prevention First, 2008; Glock *et al*., 2012:253). These latter studies highlight the fact that fear-based messages not only fail to invoke sufficient self-efficacy in overcoming the present threat (Good and Abraham, 2011:801; Manyiwa and Brennan, 2012:1432), but they further result in a number of defensive reactions that limit the success of fear appeals.

Current literature on the effectiveness of fear appeals suggests the use of different fear appeal approaches in order to overcome this problem. Specifically, recent findings suggest that formulating warnings as questions helps to overcome the unintended negative effects of fear appeals (Glock *et al.*, 2012:257; Müller *et al*., 2014:257), while further allowing for positive outcomes such as increased risk perceptions and behavioural change. However, research in this respect has been limited.

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While studies on question-based warnings have investigated the impact that this approach has on risk perceptions and short-term behaviour, the impact that question-based warnings and different types of perceived risk (i.e. social and physical) might have on consumers' protection motivation behaviour must still be investigated.

Taking these inconsistent findings into consideration, little to no attempt has been made to understand the impact of different fear appeal approaches (i.e. question-based warnings or statement-based warnings) on the PMT and its resultant effect on behavioural change intentions. Furthermore, the effects of different perceived risks (i.e. physical or social risks) on the PMT and how they might influence the effectiveness of different fear appeal approaches, has also not yet been investigated.

Therefore, this study will assess the influence of different fear appeal approaches and risk perceptions on consumers' protection motivation behaviour. Given the novelty of the use of different fear appeal approaches in South Africa as well as in the domain of alcohol consumption, this study will focus specifically on the South African context of drinking-and-driving, amongst generation Y individuals.

1.6 RESEARCH OBJECTIVES

This study had seven primary research objectives that were hierarchical in nature. Each primary objective consisted of six secondary objectives, relating to each of the PMT components. Therefore, there were 42 secondary objectives. In order of import, this study attempted to:

(1) Investigate whether question- versus statement-based warnings influence consumers' protection motivation differently in terms of their:
   - (1.1) Perceived vulnerability to a threat
   - (1.2) Perceived severity of a threat
   - (1.3) Perceived fear
   - (1.4) Perceived response efficacy
   - (1.5) Perceived self-efficacy
   - (1.6) Behavioural intent

(2) Investigate whether physical versus social risks influence consumers' protection motivation differently in terms of their:
   - (2.1) Perceived vulnerability to a threat

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(2.2) Perceived severity of a threat
(2.3) Perceived fear
(2.4) Perceived response efficacy
(2.5) Perceived self-efficacy
(2.6) Behavioural intent

(3) Investigate whether question- versus statement-based warnings and physical versus social risks influence consumers' protection motivation differently in terms of their:
(3.1) Perceived vulnerability to a threat
(3.2) Perceived severity of a threat
(3.3) Perceived fear
(3.4) Perceived response efficacy
(3.5) Perceived self-efficacy
(3.6) Behavioural intent

(4) Investigate whether males versus females influence consumers' protection motivation differently in terms of their:
(4.1) Perceived vulnerability to a threat
(4.2) Perceived severity of a threat
(4.3) Perceived fear
(4.4) Perceived response efficacy
(4.5) Perceived self-efficacy
(4.6) Behavioural intent

(5) Investigate whether males versus females and question- versus statement-based warnings influence consumers' protection motivation differently in terms of their:
(5.1) Perceived vulnerability to a threat
(5.2) Perceived severity of a threat
(5.3) Perceived fear
(5.4) Perceived response efficacy
(5.5) Perceived self-efficacy
(5.6) Behavioural intent

(6) Investigate whether males versus females and physical versus social risks influence consumers' protection motivation differently in terms of their:

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(6.1) Perceived vulnerability to a threat
(6.2) Perceived severity of a threat
(6.3) Perceived fear
(6.4) Perceived response efficacy
(6.5) Perceived self-efficacy
(6.6) Behavioural intent

(7) Investigate whether question- versus statement-based warnings and physical versus social risks and males versus females influence consumers' protection motivation differently in terms of their:
(7.1) Perceived vulnerability to a threat
(7.2) Perceived severity of a threat
(7.3) Perceived fear
(7.4) Perceived response efficacy
(7.5) Perceived self-efficacy
(7.6) Behavioural intent

1.7 HYPOTHESES

Against the background of the research objectives, the following overarching hypotheses were formulated:

H_0^1: There is no difference between the influence of question-based warnings and statement-based warnings on the components of the PMT.

H_0^2: There is no difference between the influence of physical risks and social risks on the components of the PMT.

H_0^3: There is no difference between the influence of question-based warnings and statement-based warnings as well as physical risks and social risks on the components of the PMT.

H_0^4: There is no difference between the influence of males and females on the components of the PMT.

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H_0^5: There is no difference between the influence of males and females as well as question-based warnings and statement-based warnings on the components of the PMT.

H_0^6: There is no difference between the influence of males and females as well as physical risks and social risks on the components of the PMT.

H_0^7: There is no difference between the influence of males and females as well as physical risks and social risks as well as question-based warnings and statement-based warnings on the components of the PMT.

By successfully testing hypotheses H_0^1 - H_0^7, the objectives of this study could be realised. For a more detailed specification of each of the hypotheses in terms of the individual PMT components, please refer to Appendix A.

1.8 RESEARCH METHODOLOGY

This section will detail the secondary and primary research methods, as well as the sampling process and data analyses that this study conducted.

1.8.1 Secondary Research

Secondary research is defined as previously existing data that was collected for some purpose other than the one at hand (Zikmund, Babin, Carr and Griffin, 2013:656). In this regard, online databases were used to access information pertaining to the main concepts in this study, namely social marketing, fear appeals and the inconclusive findings regarding this approach, different types of perceived risk as well as the PMT and its components.

However, the sole use of secondary data was not sufficient. Therefore, this study also undertook primary research in order to provide a comprehensive understanding of the influence that different fear appeal approaches and different types of perceived risk have on consumers' protection motivation behaviour.

1.8.2 Primary Research

Primary research is categorised into two different types, namely qualitative and quantitative research. This study utilised a combination of both techniques.

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Qualitative research was conducted via focus groups, while quantitative research made use of an experiment.

(a) Qualitative Research

Two focus groups were used to gain a deeper understanding of consumers' thoughts regarding different risks and fear appeal approaches on consumers' protection motivation behaviour. Each focus group was divided according to gender and conducted separately, as research indicates that males and females exhibit different driving behaviours as well as respond differently to different types of risk (Smith and Stutts, 2003:172). Respondents were selected based on their congruency with the target population's qualifying dimensions. Therefore, their age, whether they had consumed alcohol in the last month and whether they possess a valid driver's license, were all qualifying factors that were considered. More specifically, each focus group session was dedicated to recording respondents' responses to different examples of perceived risks (which were formulated as both questions and statements) and ensuring that their classification of the warning (i.e. as either a physical or a social risk), corresponded with the researcher's risk classification of the respective warning. In doing so, the stimuli for the quantitative research were determined.

(b) Quantitative Research

A post-test-only, four-group experimental design was used to collect the data for this study. The different fear appeal approaches (questions vs statements) served as the one independent variable, while perceived risk (physical vs social) served as the other independent variable. Consumers' protection motivation perceptions formed the dependent variables. The experiment was executed via an online questionnaire, which was created using pre-designed and pre-tested items from previous fear-based research that investigated the components of the PMT.

Before commencing with the experiment, however, the data collection instrument was subjected to a pilot test to ensure that the items that were adapted to the context of this study, did in fact measure what they intended to. Moreover, following a between-subjects design, each experimental group was exposed to only one of the experimental stimuli (i.e. the physical or social risks formulated as either question- or

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statement-based warnings), after which their protection motivation (i.e. all the components of the PMT) was measured.

1.8.3 Sampling Process

The following sections will describe the intended target population, sampling method and the sample unit selection process that this study followed.

(a) The Target Population

This study's target population was defined as generation Y males and females who were between the ages of 18 and 28, possessed a valid driver's licence, and had partaken in the consumption of alcohol in the month prior to sampling. While generation Y consumers range between the ages of 15 and 38 years, this study's target age of 18-28 years was selected for three reasons. Firstly, considering the context of the study, namely drinking-and-driving, respondents needed to be of legal drinking as well as driving age, to participate. Therefore, individuals below the ages of 18 years were not considered for this study. Secondly, selecting respondents with a smaller age difference helped to ensure that the respondents were more like-minded. Finally, research has shown that while younger drivers are most at risk in terms of road fatalities (Hatfield and Fernandes, 2009:25), individuals aged 18-28 years are most likely to engage in risky driving behaviour (Cauberghe *et al*., 2009:277).

(b) Sampling Method

This study collected data using non-probability sampling methods as no sampling frame was available. Non-probability methods include convenience, judgement, quota as well as snowball sampling (Zikmund and Babin, 2010:423). However, this study made sole use of convenience sampling for two primary purposes: to help alleviate budget and time constraints.

Due to limited resources being available, sampling took place only within the Western Cape. Given that the Stellenbosch area is populated with individuals who are congruent with part of the intended target population, this town as well as its university and inhabitants were identified as units of convenience and were used for sampling purposes.

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(c) Sample Unit Selection Process and Fieldwork

The selection of sample units took place in four phases and was undertaken simultaneously with the fieldwork. In the first instance, permission to use Stellenbosch University's students for sampling needed to be obtained. Once this permission had been granted, a request for a university-wide email distribution list was made. Upon approval of this request, the second phase began.

Four online questionnaires were created, each identical to the other, except for the warning that was displayed in each. The fieldwork consisted of emailing these four questionnaires to four randomly determined experimental groups, asking respondents to participate in the study.

The third phase of the sample unit selection process was determined by the respondents themselves. The respondents who wanted to participate in the study could then click on the link to the questionnaire.

Given that any Stellenbosch student who received the email invitation could have completed the questionnaire, qualifying questions that pertained to the eligibility of a respondent as part of this study's target population, served as the final phase of the sample unit selection process. In other words, only Stellenbosch male and female students between the ages of 18 and 28 years, who possessed a valid driver's licence and had consumed alcohol in the last month, were selected as units for the sample.

(d) Validity of the Study

Several steps were taken to ensure the validity of the study. In terms of the internal validity, the four experimental treatment conditions were randomised, while specific prompts were used in the measurement instrument to grab respondents' attention at important points, thereby helping to negate the effects of potential external forces.

In terms of this study's external validity, students who typically range between 18 and 25 years (Universum, 2014), represented a large proportion of this study's intended target population. Consequently, students were regarded as a reasonably representative sample, whose inclusion only further contributed to the increased external validity for this study.

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1.8.4 Data Analysis

Data from both the qualitative and quantitative research was analysed. For the qualitative research, a verbatim report of both focus group discussions was transcribed. This transcript was analysed to identify any recurring themes and helped to provide clarity on some of the quantitative findings.

In terms of the quantitative research, once the data from the experiment had been edited and coded, it underwent both descriptive and inferential analyses. Descriptive analyses were used to explore the role of the demographic characteristics on the empirical findings. Furthermore, it assisted in providing context for some of the questionnaire responses by yielding results about respondents' past and present drinking-and-driving behaviour.

Inferential analyses focused on realising whether this study's seven hypotheses had been proven and the research objectives realised. In order to do so, the reliability of the measurement instrument was assessed by means of a Cronbach Alpha analysis. In testing this study's hypotheses, a three-way analysis of variance (ANOVA) was conducted by means of the statistical program Statistica.

1.8.5 Results

The results for this study include everything that has been found in terms of both qualitative and quantitative data analyses.

1.9 ORIENTATION OF THE STUDY

The list of chapters for this study is as follows:

Chapter 1 has provided an introduction and brief overview of the study, its context as well as the value that this study holds for marketing. Chapter 2 will provide an in-depth review of marketing, focusing specifically on marketing communications and social marketing. The context for this study will also be elaborated on. Chapter 3 will delve into the theory relating to fear appeals. Specifically, the different fear models will be analysed and the inconclusive findings regarding the use of fear appeals will be discussed. The different types of perceived risk and their influence on fear appeals will also be addressed. Chapter 4 will focus on communication and the use of different fear appeal approaches, concentrating on the use of question-based

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warnings and the promise that it holds for social marketing. Chapter 5 will be dedicated to discussing the research design and methodology of this study while Chapter 6 will provide a thorough analysis of this study's data and results. Chapter 7 will conclude the research and provide recommendations based on the findings from Chapter 6, as well as addressing the limitations of this study and suggesting areas for future research.

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CHAPTER 2

MARKETING COMMUNICATION AND BEHAVIOUR CHANGE

2.1 INTRODUCTION

Marketing communications, and specifically social marketing communication campaigns, are an important means by which behaviour change can be facilitated. This chapter will provide a deeper understanding of the marketing discipline, focusing specifically on marketing communication and how persuasive messages can be used to effect behavioural change by means of social marketing campaigns.

In the first instance, the marketing concept will be defined, followed by detailing what can be marketed. The tools used to market, namely the marketing mix, will also be addressed, after which an in-depth discussion on marketing communication, the communication model and its components, as well as how advertising can be utilised in the form of a persuasive message, will be undertaken. The factors that assist with message acceptance, in addition to the types of persuasive appeals, will also be elaborated on, thereby laying the foundation for an understanding of social marketing. The chapter will conclude by providing a brief overview of this study's context.

2.2 MARKETING

In its simplest form, marketing is concerned with identifying and satisfying human and social needs (Kotler and Keller, 2012:27). The marketing discipline can be understood in terms of two broad definitions: commercial and social marketing (Dann, 2010:147). Commercial marketing, or marketing management, adopts a managerial definition and can broadly be defined as the set of activities, institutions and processes which facilitate mutually beneficial exchange offerings that anticipate and satisfy consumer needs more profitably and effectively than competitors, through the creation, communication and delivery of superior customer value (Kotler and Keller, 2012:27; American Marketing Association, 2013).

By contrast, the social definition of marketing highlights the role that the marketing discipline plays in society. This view of marketing can be defined as a societal process which creates value for individuals and groups by means of the free

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exchange of products and services which are both necessary and desired (Kotler and Keller, 2012:27). In other words, where commercial marketing focuses on meeting consumer needs profitably, social marketing is concerned with the well-being of society.

Each marketing viewpoint plays an essential role in consumers' lives, with their combined effect ensuring that consumer needs are met and that their well-being is taken into account. Often, when considering marketing as a whole, these two viewpoints are inextricably linked and it should be noted that unless stated otherwise, the term 'marketing' refers to both concepts in this study. Despite the importance of understanding both commercial and social marketing, this study's main focus is on the latter: the social marketing viewpoint.

2.2.1 What Can Be Marketed

There are numerous possibilities as to what can be marketed. According to Kotler and Keller (2012:27-28), there are ten main categories of what can be regarded as marketable:

- Goods include physical merchandise such as food products, technological machinery, clothing and other tangible items of a modern economy. Physical goods account for most of a country's production and marketing, as they help to satisfy consumer demands.

- Services can be defined as intangible deeds or performances that are carried out to satisfy consumer needs (Lamb, Hair, McDaniel, Boshoff, Terblanche, Elliott and Klopper, 2010:467). Examples of services include haircuts, maintenance repairs and the provision of legal advice.

- Events are any planned, social occasion. Events include artistic performances and sporting events such as the Soccer World Cup.

- Experiences include the sum of several goods and services, which are created, staged and then marketed. Disney World is a good example, as several goods (i.e. Disney merchandise) and services (i.e. Disney characters performing for the crowds) are combined to create the total experience.

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- People can also be marketed as a brand, although this form of marketing is used mostly by celebrities and well-known professionals. Examples include David Beckham, Oprah Winfrey and Taylor Swift – each individual has their own brand and appeals to a specific target market.

- Places, including cities, regions and nations can also be marketed in the competition to attract tourists, companies and residents. Las Vegas provides a good example of a location that has been marketed, with the slogan "What happens here, stays here", positioning itself as an adult playground for tourists.

- Properties include marketing the right of ownership to either real estate, such as a house, commercial buildings or other estates, or financial property, such as stocks and bonds.

- Organisations, similar to the marketing of people, can also be marketed in terms of who they are and what they represent. Organisations typically use marketing to help build a strong, favourable brand image.

- Information can be defined as the communication or reception of knowledge or intelligence (Mirriam-Webster, 2015). Information is marketed widely, particularly by books, schools and universities.

- Ideas form the starting point for any market offering. Within the field of social marketing, ideas such as "If you drink and drive, you're a killer" are promoted to ensure increased road safety. This study will focus specifically on the marketing of ideas within a social marketing perspective, against the background of drinking-and-driving.

2.2.2 Considerations When Marketing: The Marketing Mix

To effectively market any of the previously mentioned entities, it is necessary to understand the strategic tools which marketers have at their disposal, namely the marketing mix. The marketing mix, otherwise known as the four P's, refers to the distinct combination of product, pricing, distribution (place) and marketing communication (promotion) strategies that marketers utilise to create optimal exchanges for their intended market (Lamb *et al*., 2010:455).

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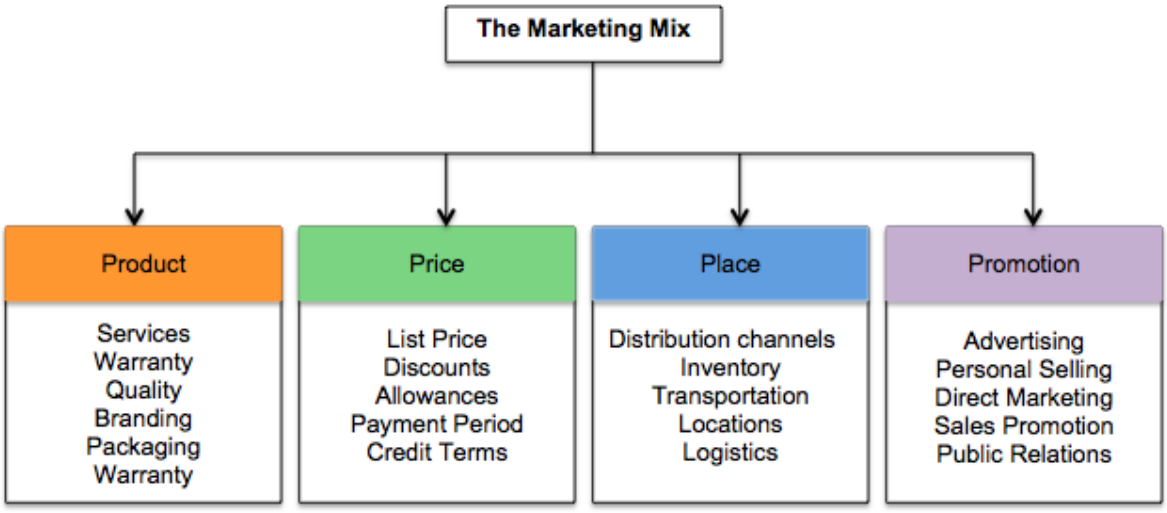
Figure 2.1 The Marketing Mix – The Four Ps



Source: Adapted from Von Brocke (2012).

As can be seen in Figure 2.1, each marketing mix component is further comprised of a set of underlying dimensions. The starting point for any marketing mix is the product strategy, as one cannot consider setting a price, confirming distribution or finalising the promotional content without a product in mind (Lamb *et al*., 2010:455). A product includes any tangible object or intangible service, as well as its package, warranty, brand name and image, that is produced and offered to a market in order to satisfy consumer needs and wants (Lamb *et al*., 2010:455; Gordon, 2012:122).

Once the product strategy has been formulated, it becomes necessary to focus on the remaining three components. The price, which is the amount that the consumer will pay to acquire the product (Gordon, 2012:122), is normally an economic cost and is often used as a means of competition. The pricing component is the most flexible of the marketing mix, as it can easily be altered and includes considerations such as discounts and payment terms (Lamb *et al*., 2010:456).

The distribution or 'place' strategy is responsible for making the product available when and where consumers want it (Lamb *et al*., 2010:455). Important considerations of this strategy include the transportation methods and distribution channels (i.e. should the product be available in physical stores as well as virtual outlets).

The last component of the marketing mix is marketing communication or the 'promotion' strategy and is defined as the processes involved in informing, educating

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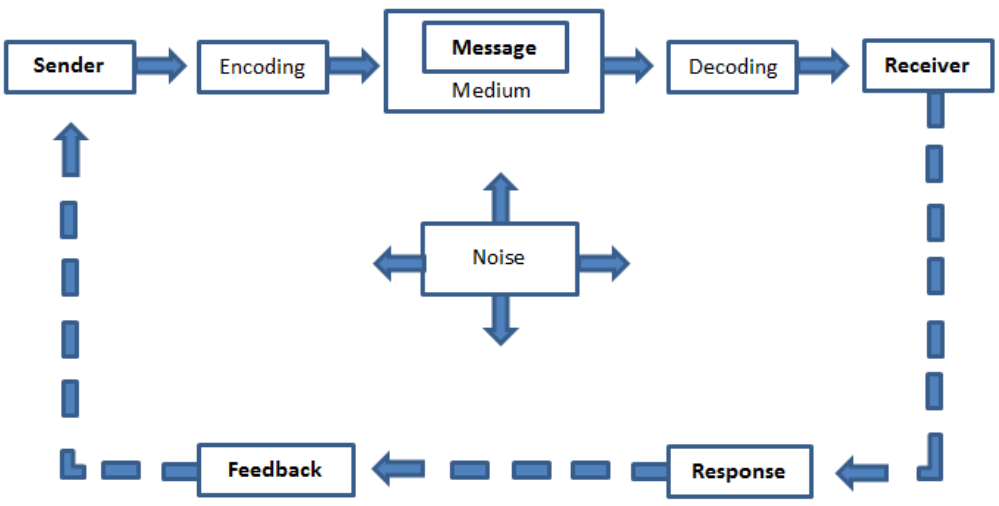
and persuading the target market about the benefits of a product (Lamb *et al*., 2010:455; Gordon, 2012:123). Marketing communication consists of advertising, public relations, sales promotion and personal selling, to name but a few.

As stated in sections 2.2 and 2.2.1, this study's focus is placed on the marketing of ideas within the social marketing perspective, against the background of drinking-and-driving behaviour. While each of the marketing mix components are important, marketing communication forms the crux of this study. By focusing on this aspect, marketing communication can allow for anti-drinking-and-driving ideas to be communicated to a specific target audience, thereby helping to realise the essence of the social marketing perspective: the well-being of society.

2.3 MARKETING COMMUNICATION

Marketing communication forms an essential part of any marketing strategy. Marketing communication is concerned with the informing, educating and persuading of a target market (Schiffman and Kanuk, 2010:280). From this definition, it is clear that the marketer sends information to the audience it would like to influence – their target market – with the intention of informing and persuading them.

Figure 2.2 The Marketing Communication Model



Source: Adapted from Maria (2012).

This process of communication can be explained using a marketing communication model, which details the transmission of a message (i.e. the information), from a sender (i.e. the marketer) to a receiver (i.e. the target market). The communication

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process can be seen in Figure 2.2. From this figure, it is apparent that there are certain components which are necessary for communication to take place. Moreover, Figure 2.2 reveals how each stage in this communication process is subject to the potential of outside noise, otherwise known as interference, which is caused by external forces (Peck, Mulvey, Jackson and Jackson, 2012).

2.3.1 The Components of the Marketing Communication Model

In the communication model, there are three main components that require attention: the sender, the medium and the receiver. The following section is dedicated to understanding how these specific components interact within the model to ensure that effective communication takes place.

(a) The Sender

The sender, also known as the source of a message, is the person who encodes and then transmits a message (Maria, 2012). For the purposes of the current study, the sender is the social marketer who selects specific words and images to represent an idea. In other words, the sender's idea is encoded into the advertisement by means of specific words and images, and is then transmitted to the receiver. As a result of the encoding process being solely undertaken by the source of the advertisement, the sender plays a significant role in influencing the content of the message (Casstevens, 1979:34).

For marketers, being able to control what message is transmitted to their target market is of particular importance. Should incorrect or unplanned information be sent to their audience, the target market might become confused by the information (Finne and Grönroos, 2009:189). This confusion could translate into negative consequences, such as dismissal of the advertisement or unfavourable attitudes towards the idea behind the advertisement. Therefore, the sender should ensure that all communications are well-planned to avoid any confusion and subsequent negative consequences. While the content of the message is essential, a strong argument alone is insufficient (Andersen, 2001:173). Rather, a strong message should be paired with a sender that possesses high credibility, as the target audience assesses both the message and the image of the sender who is attempting to persuade them (Belch and Belch, 2003:141).

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Once a sender's perceived credibility amongst the target audience has been determined as favourable, and the message content has been carefully prepared, the sender should carefully consider which communication channels will be used. That is, once the sender has completed their message, it becomes necessary to decide which medium will be used to distribute the message to the receiver.

(b) The Medium

The medium refers to the channel through which a message is sent (Casstevens, 1979:34). In terms of social marketing, there are several mediums through which advertisements can be distributed. The six major advertising channels include:

- Newspapers, which are usually considered to be a mass-market medium that has both geographic flexibility and time-related advantages (Lamb *et al*., 2010:375). Newspaper advertisements are widely used by local marketers for targeting specific areas, as they can be prepared in a timely and cost-effective manner (Belch and Belch, 2003:418). However, the layout of this medium does not lend itself to concentrated attention as many competing advertisements and news stories may distract from a marketer's intended message (Belch and Belch, 2003:421).

- Magazine advertising can prove to be expensive; however, given that magazines are targeted at specific audiences, the likelihood of a message reaching the intended audience is high (Belch and Belch, 2003:395; Lamb *et al*., 2010:375). Magazines have a longer shelf-life and the quality of advertisements and ad-recall is usually higher with this medium compared to other traditional mediums (Belch and Belch, 2003:398; Egan, 2015:266).

- Radio has experienced an increase in listeners over the last decade due to extended commuting times (Belch and Belch, 2003:351). This medium has the ability to target specific audiences, has low production costs and broad geographic flexibility (Lamb *et al*., 2010:376; Egan, 2015:266). However, the lack of a visual component may find this medium lacking for certain advertisements (Lamb *et al*., 2010:376; Egan, 2014).

- Television is one of the most expensive forms of advertising. The high level of expenditure for this medium is due to its nature as an audio-visual platform that

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allows for many creative opportunities (Lamb *et al*., 2010:376). Television allows for a wide and diverse audience reach. However, increasing ad clutter is ushering in an era of digital video recordings (otherwise known as a PVR – personal video recorder). PVRs permit audiences to partake in selective viewing, thereby avoiding advertisements altogether (Belch and Belch, 2003:350-1).

- Outdoor advertising is cost-effective and flexible with a broad reach (Lamb *et al*., 2010:376). Examples of outdoor advertising include billboards, giant inflatables and advertisements attached to the side of vehicles. Specifically in the context of advertising road safety, such as anti-drinking-and-driving and anti-speeding campaigns, the outdoor medium is used extensively (Wundersitz, Hutchinson and Woolley, 2010:12).

- Alternative media includes other mediums such as mobile marketing, which is the use of mobile devices such as cellphones and tablets to communicate with consumers on-the-go (Leppäniemi and Karjaluoto, 2005:198); interactive kiosks; the Internet; and social media platforms such as Twitter and Facebook (Lamb *et al*., 2010:376).

(c) The Receiver

Once an advertising medium has been selected, the advertisement will be transmitted through that medium to the receiver. The receiver, or the individuals in the target market, decode the message in order to process the information that it contains (Schiffman and Kanuk, 2010:281).

As with the encoding process, the decoding process is undertaken solely by the receiver. The interpretation of the decoded information is therefore influenced by each individual's respective knowledge and experience (Belch and Belch, 2003:143). From this understanding, it therefore stands to reason that the same message will not be interpreted and understood in the same way by all the recipients of a message. It is for this reason that the advertised message should be designed with great care.

Once the message has been decoded, the audience then responds via some form of feedback to the marketer, thereby completing the communication process (Schiffman and Kanuk, 2010:281). This feedback usually signals the audience's response to the

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message (Kotler and Keller, 2012:502). Potential responses include observable as well as non-observable actions. Observable actions could include refusing to drink-and-drive after exposure to an anti-drinking-and-driving advertisement, while non-observable actions include storing the information in a receiver's memory for later use (Belch and Belch, 2003:145).

The feedback that is generated by a receiver allows the sender to monitor how the message is being decoded as well as to evaluate the success of a communication (Belch and Belch, 2003:145). For effective communication to occur, the manner in which a message is decoded needs to replicate the encoding process of the sender (Belch and Belch, 2003:143). In other words, the consumer needs to understand and correctly interpret the message that the marketer is attempting to transmit. Should this shared understanding between the sender and receiver be achieved, the objectives of marketing communication are more likely to be realised, namely utilising advertising to inform and persuade consumers.

2.3.2 Advertisements: Marketing's Persuasive Messages

Persuasion is primarily a communication process and can be defined as the conscious effort to influence the thoughts or actions of a receiver (Schramm, 1973:46; Cameron, 2009:309). Therefore, persuasive messages are those that are designed to facilitate the conscious effort of influencing a consumer's thoughts and actions.

Persuasive messages can be processed in one of two ways: systematically or heuristically (Rothman and Salovey, 1997:14). The model which details these two processing routes is known as the Elaboration Likelihood Model (ELM).

(a) The Elaboration Likelihood Model

Elaboration is defined as the critical evaluation of a message's main arguments (Fry, 2006:82). Alternatively, elaboration refers to the extent to which individuals engage in issue-relevant thinking (Cameron, 2009:312). As depicted in Figure 2.3, the ELM suggests that either a central or a peripheral route to persuasion can be followed.

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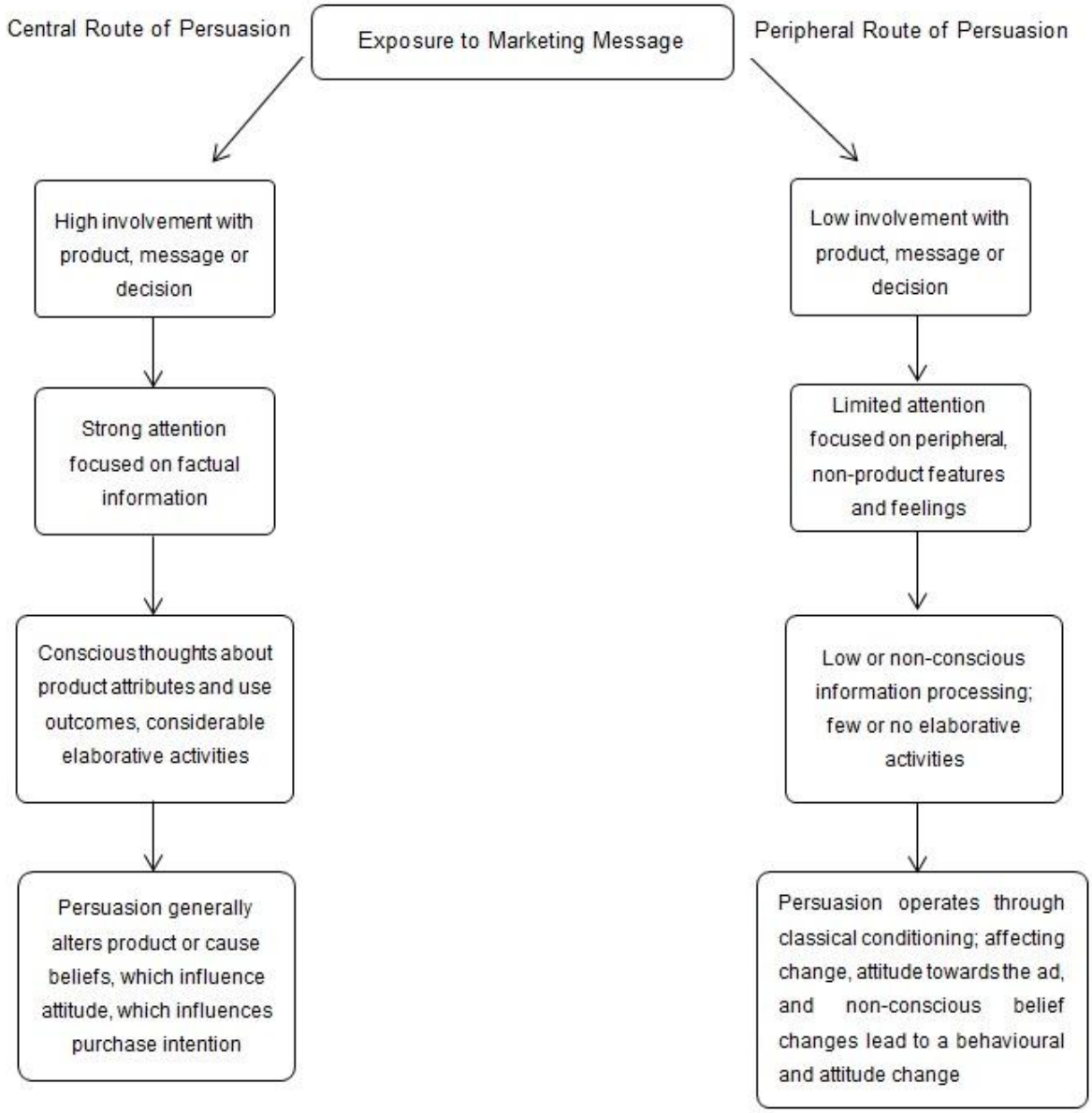
Figure 2.3 The Elaboration Likelihood Model (ELM)



Source: Adapted from Hawkins and Mothersbaugh (2013:396)

The level of a consumer's motivation and ability to process a message determines the extent to which they will engage in the different routes of elaboration (Lewis, Watson and White, 2008:404). Should a consumer possess a high level of motivation and ability to process a message, the subsequent elaboration will also be high, resulting in the central route of persuasion being taken (Fry, 2006:81; Lewis *et al*., 2008:404). Conversely, if a consumer possesses low motivation and ability to process a message, their elaboration will be low and the peripheral route of persuasion will be engaged (Lewis *et al*., 2008:404).

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The central route of persuasion evokes a cognitive change based on careful consideration of the argument presented in the message (Ruiter *et al*., 2001:618; Lewis *et al*., 2008:404). In other words, strong emphasis is placed on the information that the message contains, forcing the consumer to engage in conscious, systematic thought about the issue-relevant components of the message (Vidrine, Simmons and Brandon, 2007:94). The more relevant the argument contained in the message is, the higher a consumer's involvement will be (Fry, 2006:83). Subsequently, the more systematically a message will be processed.

By contrast, the peripheral route of persuasion evokes cognitive change based on characteristics that are peripheral to the argument itself, thereby engaging the consumer in the limited cognitive processing of a message (Papyrina, 2015:127). Peripheral cues could include the number of arguments contained in the message or the credibility of the source (Ruiter *et al*., 2001:618; Vidrine *et al*., 2007:94). As a result of the low involvement that this route of persuasion requires, the consumer engages in the heuristic processing of a message, using cues that are easily accessible to them (Lewis *et al*., 2008:404).

While cognitive change can be effected by both routes of persuasion, the systematic rather than heuristic processing of a message is preferred. More specifically, messages that are processed by way of the central route of persuasion are more persistent, more difficult to alter and better predict behavioural intentions than messages that are processed via the peripheral route of persuasion (Vidrine *et al*., 2007:94). Therefore, marketers should strive to create persuasive messages which engage consumers in the systematic processing of messages.

Given that persuasive messages can result in cognitive changes that are both difficult to change and are respectable predictors of behavioural intent, they play an important role in advertising. Persuasive messages should thus be well-planned and theoretically-based to ensure their success (Dion, 2005). Failure to do so might result in undesirable consequences, as it is well-known that persuasion attempts do not always result in a positive outcome (Brehm and Sensenig, 1966:703).

More specifically, persuasive messages can arouse defensive reactions such as resistance to the message, psychological reactance, avoidance and maladaptive behaviour (Keller and Block, 1996:449; Gardner, 2010:1; van't Riet and Ruiter,

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2013:S111). The potential for consumers to engage in undesirable responses regarding persuasive attempts, such as the aforementioned defensive mechanisms, will be discussed in greater detail in Chapter 4.

While the success of a persuasive communication message cannot be guaranteed, there are certain components of a message that can be altered to try to improve the frequency of persuasive success.

(b) Message Acceptance: Adapting Message Characteristics

Specific message adaptations can be undertaken to increase message acceptance. Message characteristics such as language use, message framing and message tailoring can and should be considered for each persuasive communication.

(i) Language Use

The words that are used in a communication message, significantly impact the way in which a message is interpreted. If the language that is used in a persuasive message is highly explicit and directive, it may be perceived as controlling (Miller, Lane, Deatrick, Young and Potts, 2007:223). Controlling language makes increased use of words such as “should”, “ought”, “must” and “need” and is perceived as being forceful and freedom-threatening (Miller *et al*., 2007:223; Gardner, 2010:26). Despite some evidence that controlling language can increase persuasion (Burgoon, Jones and Stewart, 1975:254), most findings advocate for the avoidance of dogmatic language as it contributes to the occurrence of negative persuasive outcomes (Burgoon *et al*., 1975:254-5; Bensley and Wu, 1991:1111; Shen, 2014:1).

Evidence of the negative effects of controlling language can be found in a number of studies (Dillard and Shen, 2005:148). A study by Brehm and Sensenig (1966:705) found evidence of negative consequences when controlling language was used to influence consumers. Specifically, three groups of respondents were instructed to make a choice between two alternatives. The one group was free to make their choice uninhibited; however, the second and third groups received a message suggesting which choice should be made. The latter groups differed in the level of control they believed their respective messages implied.

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The findings revealed that greater implications of control, as expressed by means of dogmatic language, resulted in less message acceptance (Brehm and Sensenig, 1966:705). An additional study by Miller *et al*. (2007:230-1) confirmed the negative effects of controlling language on persuasion. Their findings indicated that higher levels of controlling language led to a host of negative outcomes such as increased levels of anger, greater negative cognitions about the message, less intention to behave in the recommended manner as well as increased negative perceptions of source credibility (Miller *et al*., 2007:236). Therefore, to avoid the negative effects that dogmatic language may create, marketers should take care not to use language that is perceived as controlling.

(ii) Message Framing

Message framing theory suggests that positively-framed messages result in a differential influence than negatively-framed messages (Manyiwa and Brennan, 2012:1424). That is, a persuasive message can be framed in either a positive (gain-framed) or negative (loss-framed) manner. In other words, where a loss-framed message states the outcome of a particular behaviour or action in terms of a negative, gain-framed messages state the same outcome, but in terms of the positive (Maguire, Gardner, Sopory, Jian, Roach, Amschlinger, Moreno, Pettey and Piccone, 2010:346; van't Riet, Cox, Cox, Zimet, De Bruijn, Van den Putte, De Vries, Werrij and Ruiter, 2014:933). Examples include "you will die" in comparison to "you could save your life".

Thus far, findings as to which message frame is more effective have proved inconclusive. Some findings suggest that a negative appeal is more persuasive and effective than a positive appeal (Kuvaas and Selart, 2004:199-200; Williams, 2012), while others suggest the opposite (Wundersitz *et al*., 2010:18). Furthermore, some authors have argued that specific frames should be used only in certain circumstances. Manyiwa and Brennan (2012:1424) as well as Ruiter *et al*. (2001:624-5) suggest the use of loss-framed messages to promote detection behaviours, while gain-framed messages should be used when promoting prevention behaviours. However, an important consideration in deciding which message frame to use, is the manner in which the message will be processed.

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Rothman and Salovey (1997:14) stressed the importance of message processing in terms of gain- and loss-framed messages and their ability to influence consumers. A study by Wegener, Petty and Klein (1994:34) found that the persuasive ability of gain-and-loss framed messages was limited to consumers who engaged in systematic processing of the message. However, Lewis *et al*. (2008:404) suggest that under conditions of low involvement, immediately after exposure to a message, positive appeals will be more persuasive than their negative counterparts. Conversely, under conditions of high involvement, a negative appeal will be more persuasive than a positive appeal – that is, directly after exposure to the message (Lewis *et al*., 2008:405).

Considering this information, it is important that marketers consider which message frame they would like to utilise, as well as the manner in which that frame will be processed by consumers. In doing so, the advertising efforts will signify a well-planned, unified, persuasive strategy.

(iii) Message Tailoring

Message tailoring can be defined as the act of drafting a message so that it closely responds to the needs of a specific individual (Kessels, Ruiter, Brug and Jansma, 2011:32). Adapting a message to your target market, and to specific individuals if possible, increases the chance of message acceptance.

Findings by Kessels *et al*. (2011:37) revealed that respondents who had received tailored information found it to be more personally relevant and in turn, perceived the communication to be newer and appreciated it to a greater extent. Further results indicate that tailoring a persuasive message to be congruent with an individual's view of self, produces greater message acceptance (Zhao, Huh, Murphy, Chatterjee and Baezconde-Garbanati, 2014:97).

Generally, it is accepted that to make a message more persuasive, the message needs to hold greater relevance for the intended audience (Izuma, 2013:459; Dijkstra, 2014:395). However, when a personally relevant message is perceived as intending to persuade, defensive mechanisms may be initiated.

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(c) Message Acceptance: External Characteristics

Distinct from message adaptations, external characteristics such as source credibility have important implications for persuasive messages. More specifically, credibility is essential to the believability and effectiveness of messages (Reynolds and Seeger, 2005:45).

According to Sternthal and Craig (1974:27), low source credibility encourages counterarguments and a lack of persuasion from the intended audience. By contrast, high source credibility allows for the facilitation of persuasion, as the audience is prevented from generating opposing ideas to those suggested by the source (Sternthal and Craig, 1974:27; Gallopel-Morvan, Gabriel, Le Gall-Ely, Rieunier and Urien, 2011:11).

Several studies have confirmed these findings. More specifically, the relationship between message discrepancy and attitude change when source credibility is high, has been found to be positive and linear (Bergin, 1962:437; Aronson, Turner and Carlsmith, 1963:34; Brewer and Crano, 1968:13). Conversely, under conditions of low source credibility, a curvilinear relationship has been observed (Aronson *et al*., 1963:34; Brewer and Crano, 1968:13).

In adhering to these external and message-specific guidelines, persuasive advertising messages should facilitate greater acceptance among target audiences. However, this acceptance may be influenced by the type of persuasive messages used.

(d) Types of Persuasive Messages

As stated in section 2.3.2, persuasive messages facilitate the influence of consumer thoughts and actions. However, it is by means of creative strategies that marketers translate these persuasive messages into precise communication (Kotler and Keller, 2012:506). These creative strategies can broadly be defined as either positive or negative in nature and can further be classified as either an informational or emotional message appeal (Brennan and Binney, 2010:141).

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(i) Informational Appeals

Informational appeals, otherwise known as rational appeals, focus on providing meaningful facts to consumers (Cutler, Thomas and Rao, 2000:69). These messages place emphasis on a consumer's functional need for a particular product, service or idea, and stress the benefits of accepting the content of the message (Belch and Belch, 2003:267). It is by means of this provision of information that marketers hope to engage the consumer and ultimately persuade them towards some form of action. Subsequently, consumers would be motivated to either buy the product or service being advertised, or alternatively, change their behaviour (i.e. stop drinking-and-driving).

Belch and Belch (2003:267) suggest that the content of informational appeals highlights the facts, learning and the logic of persuasion. However, this suggestion demonstrates an obvious drawback of this persuasive method. Specifically, a limitation of informational appeals is that it assumes that the consumer engages solely in rational processing (Kotler and Keller, 2012:506).

(ii) Emotional Appeals

In stark contrast to informational appeals, emotional appeals are concerned with the evocation of emotions to persuade consumers (Aaker and Williams, 1998:243). Cameron (2009:310) believes that persuasive messages should gain the receiver's attention and Peters, Ruiter and Kok (2014:73-4) suggest that the best way to do so, is by evoking emotions. Not only does emotion arousal render communications memorable, it further helps to increase the mental accessibility of related knowledge (Hendriks, van den Putte and de Bruijn, 2014:685; Peters *et al*., 2014:74).

Information that is easily accessible serves as an anchor for thought processes as well as decision making (Hendriks *et al*., 2014:685). It is by means of this anchoring function that consumers rely on information which is top-of-mind and easily accessible (Strack and Mussweiler, 1997:444-5). In other words, using emotional appeals helps consumers to more easily access the information contained in the communication. These appeals make use of a wide range of emotions, which are both positive and negative. The most commonly used emotions include:

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- Fear: a negatively valenced emotion that often evokes a great degree of arousal (Hendrinks *et al*., 2014:685). Fear is typically aroused by a threat which imposes a sense of danger, and motivates consumers to deal with the threat (Laroche *et al*., 2001:297-8).

- Guilt: this emotion is aroused in response to situational or contextual factors (Block, 2005:2299). Guilt is negative in nature and the extent to which this emotion is aroused depends on two factors: unpleasant feelings regarding a negative outcome, and the belief that an individual is at least partially to blame for this negative outcome (Block, 2005:2299).

- Disgust: this negatively valenced emotion is aroused in response to repulsive objects (Hendrinks *et al*., 2014:685). The arousal of this emotion is often accompanied by certain bodily expressions and withdrawal from the object eliciting the disgust.

- Humour: related to feelings of amusement, humour, is a positively valenced emotion that is high in arousal (Hendrinks *et al*., 2014:685). This emotion is usually aroused in response to an entertaining stimulus and often accompanied by laughter.

Each of the aforementioned emotions has been used extensively in the field of marketing communications, for both commercial and social marketing purposes. These emotional appeals form the fundamental tools which social marketers utilise in order to communicate their persuasive advertisements to consumers and ultimately effect socially desirable behavioural change. Therefore, while the marketing discipline can be defined as comprising of two viewpoints, the social marketing viewpoint forms the basis for the current study, as previously mentioned.

Subsequently, the field of marketing communication will now be further explored in order to communicate emotional persuasive messages that are centred around the idea of anti-drinking-and-driving against the background of a social marketing perspective.

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2.4 SOCIAL MARKETING

The term 'social marketing' was first introduced in 1971 to refer to the application of commercial marketing to the resolution of societal problems (Kotler and Zaltman, 1971:3; MacFadyen, Stead and Hastings, 1999). Since its inception, this concept has been widely used in an attempt to effect behavioural change that contributes to the well-being of society (Laczniak, Lusch and Murphy, 1979:29; Weinreich, 2006).

2.4.1 Understanding Social Marketing

The idea that commercial practices could be applied in a non-profit arena to successfully influence behaviour, dates back to 1951 (Stead, Gordon, Angus and Mc Dermott, 2007:126-7). Thereafter, marketing scholars in the 1960s conducted research on topics that now fall within the domain of social marketing (Andreasen, 1994:108). However, it was not until 1971 that Kotler and Zaltman coined the term 'social marketing' (MacFayden *et al*., 1999).

In their original definition, Kotler and Zaltman (1971:5) proposed that social marketing is a means to influence the acceptability of social ideas by means of the design, implementation and control of specific programs. The introduction of this concept, at this point in time, was seen as a logical progression in the expansion of the marketing discipline (Andreasen, 1994:108-9). More specifically, this development was seen as reflecting two important concurrent events (Andreasen, 1994:109). In the first instance, there was mounting pressure within the marketing domain to be more socially relevant. Secondly, new technologies that had emerged in other disciplines, held great promise by means of their application to social change.

Nonetheless, the idea that commercial practices could be applied to social causes was not appreciated by everyone. Specifically, Luck (1974:71) argued that any concept that is embraced under social marketing, must first be defined within marketing as a whole and should therefore adhere to the criteria for inclusion in the marketing discipline. Luck (1974:71) contended that exchange was an important concept in marketing and that in the absence of a tangible product, no exchange can take place. Furthermore, social marketing was accused of being manipulative, facilitating self-serving purposes, posing a threat to the marketing discipline's reputation and considered inadequate to fall within the realm of marketing (Fox and Kotler, 1980:30).

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Despite the concerns that were raised, social marketing quickly gained attraction as a viable tool for facilitating societal behavioural change. By the 1980s, there was little doubt as to whether commercial marketing knowledge should be used to solve social problems (MacFayden *et al*., 1999). Instead, marketing scholars were devoted to investigating how social marketing could be developed both theoretically and practically (MacFayden *et al*., 1999).

Importantly, social and commercial marketing evolved concurrently (MacFayden *et al*., 1999). Based on Luck's (1974:71) argument, one might deduce that social marketing is defined as a concept within commercial marketing. This is not the case. Rather, as previously discussed, the marketing discipline can be described in terms of two concepts: the commercial and social marketing concepts. While these two marketing concepts do share some similarities, social and commercial marketing differ in important ways (MacFayden *et al*., 1999).

Commercial and social marketing are similar in that they are both based on the fundamental principle of the voluntary exchange between two or more parties (MacFayden *et al*., 1999). Moreover, akin to its commercial counterpart, social marketing is a framework that is based on many other bodies of knowledge (Stead, Hastings and McDermott, 2007:189). Specifically, the fields of psychology, sociology, anthropology and communications theory can contribute to an understanding of how to influence consumer behaviour (MacFayden *et al*., 1999).

Other similarities include a consumer-oriented focus as well as the inclusion of the traditional marketing mix in a social marketing strategy (Weinreich, 2006; Peattie and Peattie, 2009:262-3). In this regard, social marketing can be understood as a strategic planning process that places consumers at the core of its functions (Neiger, Thackeray, Barnes and McKenzie, 2003:76).

However, social marketing bears a greater burden than commercial marketing in terms of its ultimate objectives. The former is concerned with improving society through behavioural change, while the latter emphasises satisfying shareholders' expectations (Andreasen, 1994:110; MacFayden *et al*., 1999; Weinreich, 2006).

Specifically, social marketing is charged with the responsibility of altering deviant behaviours that are steadfast and difficult to modify (Fry, 2006:33). Such behaviours

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include cigarette smoking, unsafe road practices such as drinking-and-driving and speeding, unsafe sex, as well as unhealthy diet and lifestyle choices, to name a few (Thompson, Barnett and Pearce, 2009:181; Sheer and Chen, 2008:936; Reynolds and Seeger, 2005:47). A seminal study that demonstrates how difficult it can be to alter deviant behaviour was conducted by Parker, Manstead, Stradling, Reason and Baxter (1992:99). The results of this study revealed that despite being educated and having sufficient knowledge about the harmful effects of unsafe road practices, respondents still reported intentions to engage in the deviant behaviour.

Social marketing further differs from commercial marketing in terms of its adapted marketing mix. In other words, for social marketing, the four Ps – product, price, place and promotion – have been extended to include an additional four Ps, namely public, partnership, policy and purse.

- Public: this includes both external and internal groups. External groups are comprised of those individuals who are peripheral to the persuasion attempt and may include the target market and policy makers. The internal groups include the individuals that are trained in the implementation of the social intervention (Kar, 2011).

- Partnership: can be defined as the mutual recognition that the success of each entity is in part dependent on the other (Bucklin and Sengupta, 1993:32). Given that behaviour change is a difficult task (Fry, 2006:33), organisations that share similar campaign goals should collaborate in order to improve an intervention's effectiveness (Kar, 2011).

- Policy: while social marketing strives to effect behavioural change on an individual level for the improvement of society as a whole (Lee and Park, 2012:2), policy changes need to occur to ensure the sustainability of such campaigns (Kar, 2011). Therefore, policy makers need to understand and appreciate what social marketers are trying to convey in order to effect sustainable societal changes.

- Purse: circumstances dictate that most social marketing campaigns are operational thanks to funds provided by private donations, foundations and non-governmental institutions (Kar, 2011). This financial consideration presents a

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further point for the contemplation of the sustainability of campaigns, and should be well-planned to ensure the sustained continuation of social marketing efforts.

In their original conceptualisation of social marketing, Kotler and Zaltman (1971:5) clearly distinguished the concept from that of social advertising. Specifically, the authors argued that the social marketing concept is much broader than social advertising and communication. Fox and Kotler (1980:25) extended this argument by stressing that while the roots of social marketing can be found in social advertising, the former constitutes a larger paradigm for facilitating social change.

In other words, the ultimate objective of social marketing – namely social change – can only be realised by implementing the entire social marketing mix. Given that social marketing is a strategic planning process, these additional marketing elements provide an enhanced platform on which to base social intervention strategies, and they serve as the infrastructure for considerations when designing social marketing campaigns.

2.4.2 Considerations for Social Marketing Campaigns

The task of changing behaviour is not simple. As knowledge is a pre-condition of behaviour change (Renner and Schwarzer, 2003:189), social marketers are responsible for informing their target market about specific issues as well as the consequences thereof. As an example, against the background of drinking-and-driving, a social marketer will provide information about drinking-and-driving, such as how dangerous it is as well as how this deviant behaviour can be avoided.

In other words, social marketers must transmit a message that is both unpalatable and undesirable in terms of the knowledge it is disseminating, and to a target market that is currently engaging in the negative behaviour (Cummings, 2012:26). In light of the sensitive and sometimes controversial nature of social marketing messages, it is important that social marketing campaigns are carefully constructed. Specifically, these persuasive interventions should be grounded in formative research which defines the scope, as well as provides a sound, evidence-based understanding of the core contributing factors to the problem (Fernandes, Hatfield and Job, 2010:180; Maguire *et al*., 2010:345). In this way, social marketing campaigns are more likely to be successful.

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A second consideration that needs to be addressed is that of the target audience. As previously mentioned, social marketing is consumer-oriented (Peattie and Peattie, 2009:263). In other words, social marketing campaigns are committed to understanding the consumers whose behaviour they are striving to change (Grier and Bryant, 2005:324). Therefore, extensive consumer research should be conducted to better understand their needs, wants, aspirations, everyday lives as well as any challenges that they may face in trying to alter their behaviour (Grier and Bryant, 2005:324; Peattie and Peattie, 2009:263). Ensuring a proper understanding of the target market is invaluable, as failure to do so would result in ineffective communication (Williams, 2012).

Assuming that sufficient research information is available, social marketers should consider the planning as well as the monitoring and revision of social marketing campaigns. Similar to commercial marketing, social marketing should have a long-term focus (MacFadyen *et al*., 1999; Hastings and McDermont, 2006:1211). In other words, rather than developing once-off campaigns, social marketers should focus on creating long-term, strategic interventions that help to foster sustainable relationships with consumers.

Moreover, at the outset of the planning process, strategies for evaluating and monitoring social marketing campaigns should be developed (Grier and Bryant, 2005:325). Upon program implementation, evaluation strategies should be initiated to determine the effectiveness of the strategy and whether it should enjoy continued implementation or be revised (Grier and Bryant, 2005:325). Specifically, social marketers are continuously engaged with their target audience via the feedback they provide, and as such, they help to facilitate successful marketing communication. It is only by means of effective monitoring and revision that campaign success can be determined. Therefore, considerable resources should be devoted to maintaining and improving this activity (Grier and Bryant, 2005:325).

Confirming this theoretical discussion on the considerations for effective social marketing campaigns, there are several real-life interventions that have been successful (Fox and Kotler, 1980:27; Grier and Bryant, 2005:327; Smith, 2006:38). More specifically, a systematic review of social marketing effectiveness conducted by Stead *et al*. (2007:126) investigated 54 social marketing interventions. Their findings indicated that social marketing can be effective across a range of undesirable

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behaviours such as smoking, alcohol consumption and drug use. Moreover, the effectiveness of social marketing interventions was sustained across a range of different target audiences and settings, influencing policy and professional practice as well as individual behaviour (Stead *et al*., 2007:126).

Smith (2006:38) describes a number of effective social marketing campaigns. For example, a 'Friends don't let friends drive drunk' campaign that was conducted in America, reported that 80 per cent of the consumers who had recalled the message took some form of action to stop a friend from driving drunk. A further 25 per cent had reported that they no longer drank-and-drove (National Highway Traffic Safety Administration, 2006).

Furthermore, large-scale behavioural changes were found at a community level in Bolivia, Ghana as well as Madagascar (Quinn, Guyon, Schubert, Stone-Jiménez, Hainsworth and Martin, 2005:345). This intervention, which sought to improve breastfeeding practices in the respective countries produced significant results. Within three to four years, timely initiation of breastfeeding increased from 56 to 74 per cent in Bolivia, 32 to 40 per cent in Ghana and 34 to 78 per cent in Madagascar (Quinn *et al*., 2005:345).

Social marketing interventions have also been effective in South Africa. For instance, an AIDS education program that was designed to raise awareness about AIDS, revealed significant results (Kuhn, Steinberg and Mathews, 1994:161). After exposure to the program, consumers' knowledge about HIV transmission and prevention increased. Improved levels of acceptance of people with AIDS as well as an influence on behavioural intentions were also reported (Kuhn *et al*., 1994:161). Another project aimed at combatting AIDS in South Africa was the Soul City project. The results of this intervention revealed that greater exposure to the Soul City project was associated with increased condom use among consumers aged 16-24 years (Speizer, Magnani and Colvin, 2003:337).

From this discussion, it is evident that social marketing can be effective. Importantly, however, for such social marketing success to be realised, a marketer first needs to capture a consumer's attention. Emotion and its application to social marketing, has been identified as an efficacious means of engaging a consumer (Fry, 2006:24).

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2.4.3 Emotion-Based Social Marketing Campaigns

Emotions are typically perceived as internal mental states that vary in intensity and represent evaluative, valenced reactions to occurrences, agents or objects (Nabi, 2015:114). Particularly in the realm of persuasion, extensive evidence shows that emotions influence decision-making processes as well as attitude and behavioural change (Nabi, 2015:115). Seeing that an important goal of social marketing is to persuade consumers to avoid harmful behaviours, appealing to emotions can be a key means of realising this objective.

Not only do emotional appeals help to render communications memorable (Peters *et al*., 2014:74), they also allow for the increased mental accessibility of related knowledge (Hendriks *et al*., 2014:685). A study by Goldstein, Wall, McKee and Hinson (2004:101) confirmed this latter effect. Their findings revealed that by means of emotional messages, induced mood states influenced the mental accessibility of alcohol-related beliefs.

The type of emotion that is evoked in a social marketing intervention also influences the extent to which the message is processed. For instance, negative emotions are associated with detail-oriented cognitive message processing, while positive emotions are associated with cognitive processing that exerts minimal effort (Terpstra *et al*., 2014:1509). In other words, the former is associated with systematic message processing, while the latter is related to heuristic message processing.

Literature pertaining to the classification of emotions is extensive; however, there are two broad streams of research. Emotions can either be classified as discrete categories, or alternatively viewed as overlapping dimensions (Bagozzi and Moore, 1994:57). Two classificatory paradigms which represent these contrasting research streams respectively are Shaver, Schwartz, Kirson and O'Connor's (1987) classification as well as Watson and Tellegen's (1985) model.

In the first instance, Shaver *et al*. (1987:1062) suggest that people organise their emotions in memory into superordinate, basic and subordinate categories. The superordinate level comprises of two subcategories: positive and negative, while the basic level comprises of five subcategories, and the subordinate level has upwards of 135 subcategories (Bagozzi and Moore, 1994:57). For the purpose of this study,

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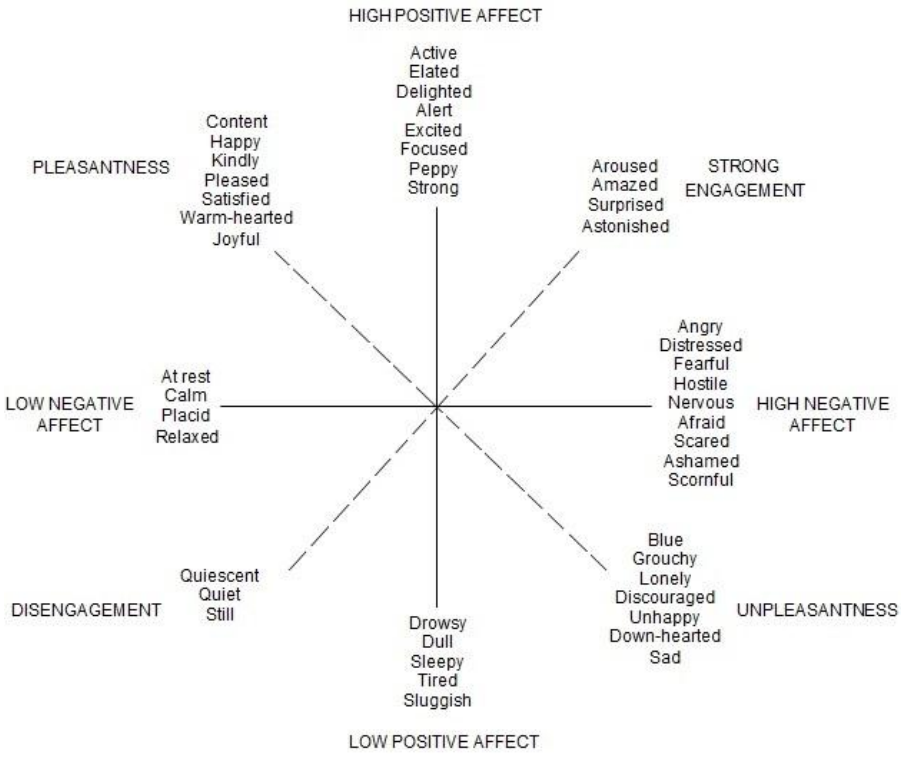
having an understanding of only the basic level is most pertinent, as it is at this level that consumers interpret their environment and process information (Bagozzi and Moore, 1994:57).

Specifically, Shaver *et al*. (1987:1061) claim that the basic level according to which people can organise their emotions, comprises of five emotional categories, namely love, joy, anger, sadness and fear. These five basic emotions are further categorised as either a positive (i.e. love and joy) superordinate or a negative (i.e. anger, sadness and fear) superordinate. The positive emotions, otherwise known as approach affect, arise from beneficial relationships, while the negative emotions, alternatively known as avoidance affect, result from threatening relationships (Fry, 2006:26). In other words, the manner in which a consumer perceives a situation (i.e. beneficial or threatening), will determine which superordinate category (i.e. positive or negative) and basic emotion (i.e. love, joy, anger, sadness or fear) will be aroused.

Contrastingly, Watson and Tellegen (1985:219) suggest that emotion is a two-dimensional structure, consisting of positive and negative affect. Their model is illustrated in Figure 2.4.

Figure 2.4: Watson and Tellegen's Model of Emotion Hierarchies



Source: Adapted from Watson and Tellegen (1985:221)

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As shown in Figure 2.4, emotional reactions can be categorised into two dimensions of either high or low positive affect and high or low negative affect. Thereafter, the positive and negative dimensions are further related to other emotional factors (Fry, 2006:26). These other factors range from pleasantness to unpleasantness or strong engagement to disengagement. In terms of practicality, Watson and Tellegen's (1985:221) model suggests that the emotions a consumer will experience in a given situation will alternate, depending on the valence and urgency of the prevailing event.

Various emotional appeals, both positive and negative in nature, have been reviewed in this chapter. Importantly, the emotions that are identified as pertinent in both Shaver *et al*. (1978) and Watson and Tellegen's (1985) research, are encompassed in the aforementioned review on emotional appeals.

However, the emotion that appears to be most prominent and consistent in this discussion, is that of fear. Not only does this emotion comprise one of the five basic emotions in Shaver *et al*.'s (1987:1061) findings, but Watson and Tellegen (1985:221) further identify this emotion as encompassing high negative affect. The same cannot be said for the other types of emotional appeals used in social marketing, namely humour, guilt and disgust. Moreover, studies using different types of affect (both positive and negative) revealed that negative emotional states resulted in more systematic processing, whereas positive emotional states resulted in the heuristic processing of a message (Kuvaas and Selart, 2004:200).

In other words, by means of evoking negative emotions such as fear, consumers processed the information more systematically, allowing for the increased understanding of the message and the potential for more sustained behavioural change. These findings lend support to the important role that fear can play in emotional appeals, specifically in relation to social marketing.

Therefore, this study will be focusing on one specific emotional appeal: fear appeals. Not only are fear appeals the most frequently used in social marketing campaigns, but they have also been identified as having a significant effect on message recall, persuasion and behavioural responses (Rayner, Baxter and Ilicic, 2014:62). Moreover, the emotion that these appeals arouse (i.e. fear) has been identified as a primary motivator of systematic message processing (Terpstra *et al*., 2014:1509) as well as behavioural change (Rogers, 1983:155; Job, 1988:164) – which is any social

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marketing campaign's primary objective. Specifically within the realm of road safety, the use of fear has featured prominently as a means by which to effect behavioural change (Lewis, Watson, Tay and White, 2007:203).

2.5 ROAD SAFETY: THE SOUTH AFRICAN CONTEXT

Road safety represents a burden to society from both an emotional and economical perspective (Fry, 2006; Fernandes *et al*., 2010:179). Each year, an estimated 1.2 million people are killed in road accidents, highlighting road incidences as one of the main causes of death and disability throughout the world (Cismaru, Lavack and Markewich, 2009:2; Constantinou, Panayiotou, Konstantinou, Loutsiou-Ladd and Kapardis, 2011:1323). The situation in South Africa is no different.

In fact, South Africa's road safety is rated fourth worst in the world, with annual road crashes totalling approximately R16 billion (Viljoen, Terblanche-Smit and Terblanche, 2009:119). In 2013, 15 000 people were killed in accidents attributed to a lack of concern for road safety (WHO, 2014), while during the period from 1 December 2014 to 5 January 2015, 1 368 fatalities were attributed to the same cause (SADD, 2015).

It is believed that between 90 and 95 per cent of road accidents are attributable to human factors – that is, factors that are a result of human behaviour (Ulleberg and Rundmo, 2003:427; Constantinou *et al*., 2011:1323). Human factors include cognition, or a driver's inability to pay attention, fatigue, the consumption of alcohol, risky and aggressive driving behaviour and failure to use safety measures such as seatbelts (Constantinou *et al*., 2011:1323). While each of these factors contributes to the prevalence of road accidents, the top causes of death on South African roads are speeding, dangerous and reckless driving, as well as abuse of alcohol by both drivers and pedestrians (Road Traffic Management Corporation, 2012:5).

In light of the serious nature of road accidents, the South African government continues to stress the importance of road safety (Peters, 2015b). Consequently, in an effort to reduce the number of road-related deaths within the country, South Africa has invested in the design and implementation of a number of fear-based social marketing interventions and campaigns (Brandhouse, 2009; Avert, 2012; SAB, 2012; Dube, 2014; Arrive Alive, 2015; Peters, 2015b).

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Particular interest has been directed towards the design of campaigns that highlight the devastating effects of alcohol consumption and road use (Brandhouse, 2009; SAB, 2012; Dube, 2014; Arrive Alive, 2015), after findings suggested that alcohol abuse is a major contributor to road deaths in South Africa (SADD, 2013; Arrive Alive, 2014; News24, 2014; Peters, 2015c). More specifically, drinking-and-driving is a preventable health risk that contributes significantly towards the annual road-related deaths and injuries (Greening and Stoppelbein, 2000:94; Lewis *et al*., 2007:203; Cismaru *et al*., 2009:2). In South Africa, every 6 out of 10 accidents are caused by alcohol, with young adults aged between 18-28 being most at risk (Viljoen *et al*., 2009:119). As a result of these statistics, the primary intent of anti-drinking-and-driving social campaigns is to create fear and in doing so, alter this undesirable consumer behaviour.

2.6 SYNOPSIS

This chapter has strived to develop an understanding of the marketing discipline. Emphasis was placed on the importance of marketing communication as a strategic tool, as well as the use of advertising to facilitate persuasive messages. The factors that contribute to message acceptance in addition to the different types of persuasive messages, were also addressed. It was by means of this theoretical discussion, that the foundation for understanding social marketing was laid. This chapter further concentrated on addressing key social marketing concerns such as considerations for designing effective campaigns, discussing the extended social marketing mix and how emotional appeals are best used in social marketing to effect social change.

In conclusion, it is evident that social marketing forms an important component of the marketing discipline. Through the use of emotional appeals such as fear appeals, social marketing can not only effect behavioural change on an individual level, but on a societal level as well.

Using this foundation as the point of departure, the following chapter seeks to theoretically explore fear appeals in their entirety, focusing on contrasting fear appeal theories and the discussion of different fear appeal models. In essence, this discussion will strive to determine the true effectiveness of fear appeals.

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CHAPTER 3

THE USE OF FEAR APPEALS IN MARKETING COMMUNICATION

3.1 INTRODUCTION

Social marketing is an important mechanism to inform, increase awareness and change behaviour to improve public health and safety (Reynolds and Seeger, 2005:45; Lee and Park, 2012:2). While altering consumer behaviour is not easy, it is made all the more difficult when transmitting a message that is both unpalatable and undesirable in terms of the knowledge it is disseminating, and in particular to a target audience that is currently engaging in the negative behaviour (Cummings, 2012:26). As a means of capturing consumers' attention and engaging them in meaningful message elaboration, the literature suggests the use of emotion-based messages (Peters *et al*., 2014:73-4). More specifically, the use of fear-laden messages has been suggested to realise the objectives of social marketing.

Using fear appeals in preference to other emotional messages has been advocated because it is believed that consumers are more likely to recall messages that use fear to elicit a response (Chung and Ahn, 2013:454). Similarly, fear has been identified as a primary motivator of behavioural change (Rogers, 1983:155; Job, 1988:164). This chapter is, therefore, dedicated to developing a sound comprehension of aspects related to fear appeals with a specific focus on the different fear appeal models.

Firstly, fear appeals and their role in social marketing will be addressed, followed by identifying the four fear appeal components as well as the factors that contribute to a successful appeal. The origins of fear appeals will also be discussed, followed by an in-depth investigation of the modern fear appeal models. This chapter will conclude by identifying the model that has been selected for the present study.

3.2 FEAR APPEALS

Fear appeals can be defined as persuasive communication that hopes to arouse an emotional, fear-laden response, in order to effect precautionary motivation as well as self-protective action (Ruiter *et al*., 2001:614). This method of persuasion typically depicts the consequences of the deviant behaviour in question, in the hope that this

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threat will result in fear arousal. Should fear be evoked, consumers would be encouraged to desist from partaking in the undesirable behavior and to rather implement the recommended coping response (i.e. calling a taxi home after drinking, instead of drinking-and-driving) (Rogers, 1983:154). In other words, fear is the outcome of exposure to a threat, and acts as a motivating force, potentially influencing positive behavioural change.

It is evident that behavioural change is the function of both external and internal processes. A threat, defined as the harm that an individual will suffer should they neglect to follow the recommendations to overcome the deviant behaviour, acts as the external factor (Murray-Johnson, Witte, Liu, Hubbell, Sampson and Morrison, 2001:336). Fear is the emotional response to a threat and can be described as the internal factor (Laroche *et al*., 2001:297). Understanding the difference between these two concepts is crucial, as the literature contends that these two terms have incorrectly been used interchangeably in the past. For the purpose of the current study, the aforementioned distinction between fear and threat should be kept in mind.

3.2.1 Fear Appeals and Social Marketing

Fear appeals have been researched and used extensively in social marketing campaigns since 1953, in an attempt to convey health and safety-related information to the public (Witte and Allen, 2000:591; de Hoog, Stroebe and de Wit, 2007:258). This trend is due to fear appeals being identified as having a significant effect on message recall, persuasion and behavioural responses among the target audience (Rayner *et al*., 2014:62). The widespread use of fear appeals has seen many diverse fields of concern being focused on, in an effort to effect social change. Some of the more common social marketing areas that use fear appeals include, the prevention of spreading HIV/AIDS, road safety campaigns aimed at preventing drinking-and-driving, and cigarette smoking cessation campaigns (Laroche *et al*., 2001:298; Tay, 2002:200; Sheer and Chen, 2008:936).

The resolute use of fear in the realm of social marketing for the past 60 years, is due to the motivating force of this emotion. Rogers (1983:155) believes that fear incites a motivational state within consumers, thereby helping to mediate behavioural change. Further evidence supporting the use of fear in social marketing campaigns is prominent in the literature. For instance, Laroche *et al*. (2001:298) holds the view that

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fear is a significant motivator, while Fry (2006:13) concluded that fear is a primary emotion that helps to prevent negative behaviour. This latter notion was confirmed by Cummings (2012:42), who suggested that fear is a powerful emotion, while Williams (2012) proposed that fear might be even more powerful than reason.

The aforementioned information provides a sound argument as to why fear appeals are frequently used in social marketing. However, to fully understand fear appeals, one first needs to appreciate from whence this concept originated.

3.2.2 Fear Appeal Origins: Contrasting Theories

Fear appeals started gaining popularity as a viable means of persuasion in the 1950s, signaling the onset of an era of fear appeal research (de Hoog *et al*., 2007:259). The first known theories to address fear and its persuasive effects, are collectively known as the drive models (Beck and Frankel, 1981:205). A drive can be defined as a motivating factor that encourages action (de Hoog *et al*., 2007:259). Drive models include the fear-as-acquired drive model, the family of curves model, as well as McGuire's non-monotonic models (Witte and Allen, 2000:593). Of these models, the fear-as-acquired drive model was the first model to be suggested and can be considered the most prominent.

(a) Fear-as-acquired Drive Model

Formulated in 1953 by Hovland, Janis and Kelley, the fear-as-acquired drive model proposes that fear is an acquired drive. The model was so named due to the belief that fear is a learned response that encourages consumers to take some form of action regarding the threatening cue. In an attempt to reduce this emotional state aroused in the consumer, any response that reduces the anxiety will be reinforced (Rogers, 1983:155; Fry, 2006:40). The model further suggests that the stronger the drive, the greater the motivational factor (de Hoog *et al*., 2007:259). In other words, the greater the level of fear, the more persuasive the message is and the more motivated consumers will be to act.

In 1967, the fear-as-acquired drive model was extended by Janis (Rogers, 1983:155). The crux of the extended model is that incremental levels of fear are associated with increased levels of persuasiveness, resulting in message acceptance – up to a certain point (Higbee, 1969:439; Dion, 2005:16; Lewis *et al*., 2007:204-5).

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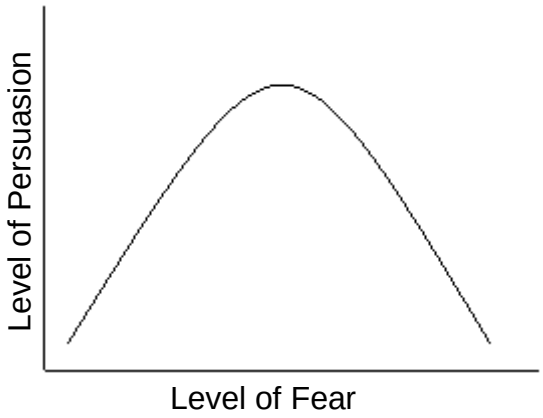
Beyond this point, as the level of fear aroused increases, levels of persuasion decrease, along with the likelihood of subsequent message acceptance (Higbee, 1969:439-440). Consequently, the extended fear-as-acquired drive model can be explained in terms of an inverted U-shape, thereby detailing the relationship between fear and persuasion (Sternthal and Craig, 1974:25). This relationship, otherwise known as the curvilinear model, is depicted in Figure 3.1.

Figure 3.1 The Curvilinear Model of Fear



The curvilinear model of fear proposed that in situations where the optimal level of fear is exceeded, not only will persuasion efforts suffer, but negative consequences, such as defensive mechanisms, will be induced (Sternthal and Craig, 1974:25; de Hoog *et al*., 2007:259). Since fear is a negatively valenced emotion, consumers will make use of any response that helps to reduce this undesirable emotional state (Rogers, 1983:155; Fry, 2006:40). However, should the recommended response be deemed ineffective in reducing the level of fear aroused, or too difficult to implement, consumers will engage in defensive reactions (de Hoog *et al*., 2007:259).

In summary, the curvilinear model depicted in Figure 3.1 contributed to fear appeal research in two ways. Firstly, the model indicated that there is an optimal level of fear that should be used to ensure that persuasion efforts are maximised. According to the model, should a low level of fear be used, the resulting persuasion would not be appropriate to evoke sufficient behavioural change (Chung and Ahn, 2013:454). On the other hand, should too much fear be used, individuals would react defensively, causing a subsequent lack in behaviour alteration (Sternthal and Craig, 1974:25; Chung and Ahn, 2013:454). Therefore, the curvilinear model identifies the optimal level of fear as moderate.

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In the second instance, the curvilinear model indicated that when high fear appeals are utilised to effect a behavioural amendment, persuasion is diminished as a result of consumer-employed defensive mechanisms (de Hoog *et al*., 2007:259). For instance, findings from Krisher, Darley and Darley's (1973:301) study revealed that respondents across three experimental groups (low, moderate and high fear conditions), reported strong intentions to undergo a free vaccination against mumps. However, actual behaviour was found to be curvilinear in relation to fear. In other words, respondents in the moderate fear condition were more likely to be vaccinated than respondents in the other fear conditions, therefore providing direct empirical support for the curvilinear model.

Despite these contributions, the study conducted by Krisher *et al*. (1973:301) was the only one that documented the existence of a curvilinear relationship, besides Janis and Feshbach's (1953) study (Beck and Frankel, 1981:206; Ruiter *et al*., 2001:615). As a result of the inadequate empirical evidence for the curvilinear model, it was not widely accepted (Rogers, 1983:156; Cummings, 2012:32).

Rogers (1983:156), provides three reasons why this curvilinear theory was rejected. Firstly, the model was found wanting in terms of specific variables that should interact with fear, such as how effective the fear-avoiding recommendations are (Rogers, 1983:156). Secondly, while the model proposes that a consumer's need to reduce fear arousal is the factor that instigates behavioural change, contrasting findings reveal otherwise. To be precise, arousal itself was found to be the producer of behavioural change, not drive reduction (Rogers, 1983:156). Finally, later studies that were conducted, did not confirm a direct relationship between emotional responses and resulting changes in behaviour, as suggested by the fear-as-acquired drive model (Rogers, 1983:156).

While the curvilinear model may be lacking in theoretical support, this model laid the foundation for research in the realm of fear appeals. Moreover, it serves as the foundation for the application of learning theory principles to fear appeals and behavioural change (Rogers, 1983:156).

(b) The Parallel Response Model

In 1970, Leventhal proposed the parallel response model, whose theoretical underpinnings were in direct contrast to that of the curvilinear model (Rogers,

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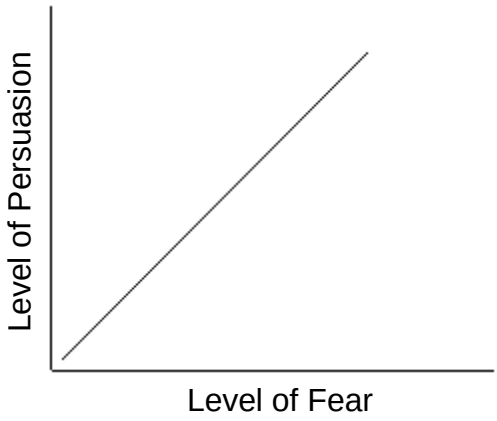
1983:157; Dion, 2005:16). Unlike the curvilinear model, the parallel response model suggests that using high levels of fear works best for initiating behavioural change (Dion, 2005:16). This notion, otherwise known as the positive linear model, advocates that the higher the level of fear, the greater the behavioural change will be (Ruiter *et al*., 2001:615; Manyiwa and Brennan, 2012:1421). In essence, the relationship between fear arousal and persuasion is positive and linear, rather than curvilinear (Manyiwa and Brennan, 2012:1421). The model for this alternative explanation of the fear-persuasion relationship is illustrated in Figure 3.2.

Figure 3.2 The Positive Linear Model of Fear



The positive linear model of fear, as depicted in Figure 3.2, has consistently received greater empirical support than the curvilinear model. A meta-analysis of fear appeal-related studies, conducted between 1953 and 1980 revealed findings that strongly supported the positive linear model (Floyd, Prentice-Dunn and Rogers, 2000:409). Specifically, the results indicated that increased levels of fear consistently resulted in greater acceptance of the message, therefore increasing the likelihood of behavioural change. To date, no consensus has been reached as to which model of the fear-persuasion relationship results in greater behavioural change, although most findings seem to support the positive-linear model (Fry, 2006:40).

While the parallel response model does advocate for the positive linear relationship between fear and persuasion, the focus of the model lies elsewhere. Rather, the crux of Leventhal's (1970:126) model is that it distinguishes between two responses to a threat: an emotional, 'fear control response' and a cognitive 'danger control response'.

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In terms of practicality, when a threat presents itself it is appraised and can result in either or both of the two responses. These two processes function independently and parallel to one another, and may affect the other during the course of decision-making (Sternthal and Craig, 1974:25-6). The fear control process promotes defensive behaviour by attempting to reduce the negative affect that results from a perceived threat (Sternthal and Craig, 1974:25). Some fear control responses might include such actions as denying the existence of the threat, or ignoring it altogether (de Hoog *et al*., 2007:259). In contrast, the danger control process pertains directly to protective behaviour and taking actions that will eliminate the imposing threat, such as adopting the recommended threat-reducing actions (Sternthal and Craig, 1974:25; de Hoog *et al*., 2007:259).

When confronted with criticism about the parallel response model being untestable (Beck and Frankel, 1981:209; Witte and Allen, 2000:593), Leventhal (1970:181) admitted that the model was only a first step toward structuring a theory. As a result, the parallel response model was also deemed inadequate as an encompassing fear appeal model. Further reasons for this judgement included the model's failure to specify the circumstances under which each of the two processes would be initiated (Lewis *et al*., 2007:205).

Despite the lack of empirical support, the parallel response model received greater support than the fear-as-acquired drive model. While this support was not empirically linked to the parallel response model itself, contemporary fear appeal models which are based exclusively on this theory have found strong empirical evidence in support of this theoretical foundation.

To conclude, the fear-as-acquired drive model and the parallel response model – more recently referred to as the parallel process model – serve as the origins for fear appeal research and contemporary fear appeal models. However, more 'modern' fear appeal models have since been proposed.

3.2.3 Modern Fear Appeal Models

Current fear appeals include the protection motivation theory (PMT) and the extended parallel process model (EPPM).

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(a) The Protection Motivation Theory

The protection motivation theory, otherwise known as the PMT model, was introduced by Rogers (1975:93), who attempted to advance the conceptualisations of fear appeal research. Essentially, Rogers chose to focus his attention on providing a detailed explanation of the danger control process of the parallel response model (Dion, 2005:16). More specifically, the PMT model endeavours to explain how and when protective behaviour is engaged (Floyd *et al*., 2000:408). As a result, the PMT places increased emphasis on the cognitive factors that influence fear appeal persuasive attempts (Rogers, 1983:158; Lewis *et al*., 2007:205).

The focus of the PMT model is on two cognitive processes, namely the threat appraisal process and the coping appraisal process (Rogers, 1983:167). Section 3.2 highlighted that the fear-behaviour change relationship is the function of both external and internal processes. Importantly, the PMT's threat and coping appraisal processes represent the internal decision-making that occurs when consumers are faced with an external threat (Sheer and Chen, 2008:938).

The threat appraisal component consists of two variables, the magnitude of the noxiousness and the probability of occurrence, while the coping appraisal component consists of the efficacy of the recommended coping response (Cismaru *et al*., 2009:8). Essentially, the former is concerned with evaluating the prevailing threat, while the latter strives to select an appropriate coping mechanism to manage the presented threat (Arthur and Quester, 2004:675; Floyd *et al*., 2000:408). In other words, Rogers' model proposes two cognitive processes consisting of three variables: the magnitude of the noxiousness, otherwise known as perceived severity; the probability of occurrence, also referred to as perceived vulnerability; and perceived response efficacy. The two processes as well as the three components are graphically depicted in Figure 3.3.

As shown in Figure 3.3, the respective cognitive processes interact to produce the final outcome: the adoption of protective behaviours, otherwise known as protection motivation. Protection motivation can be defined as an intervening variable that is similar to other motives: it arouses, sustains and directs activity (Rogers, 1975:98; Floyd *et al*., 2000:410; Ruiter *et al*., 2001:616). Importantly, protection motivation is measured in terms of an individual's behavioural intention, as it is the intent to adopt

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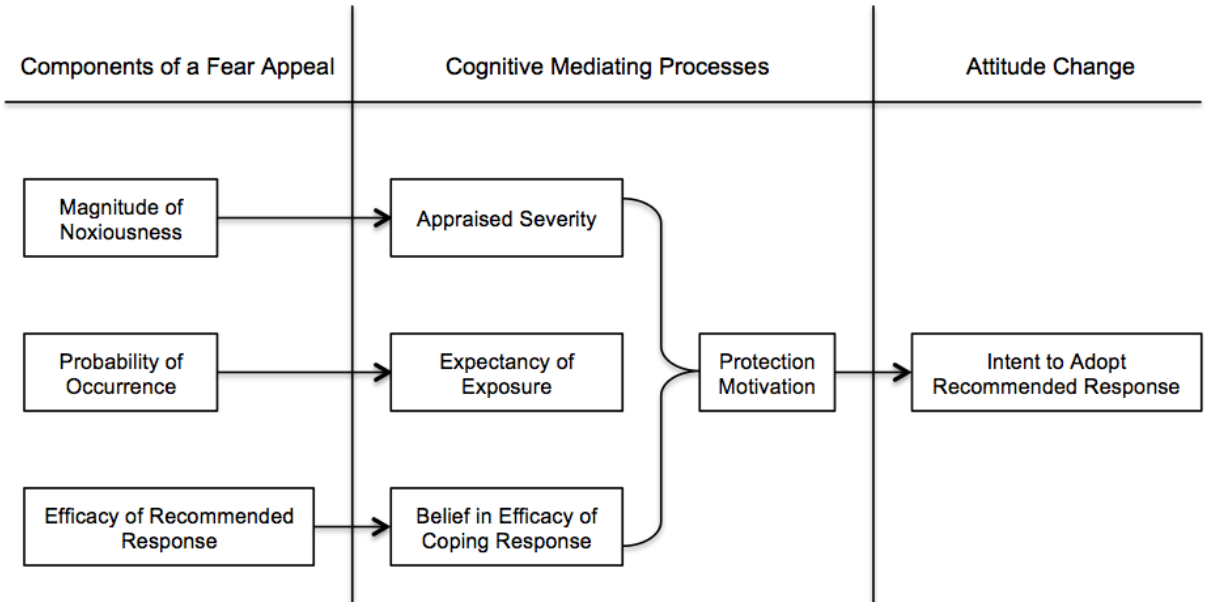
a communicator's message and subsequent recommendation (Rogers, 1983:170; Ruiter *et al*., 2001:616).

Figure 3.3 The Original PMT Model



Source: Adapted from Rogers (1975:99)

While protection motivation is the sum of the PMT's two cognitive processes, the initiation of protective behaviour will only be brought about if conditions permit it. There are two important considerations in this regard. Firstly, a threat must be perceived as being severe and the target audience should feel vulnerable to it (Block, 2005:2294). Secondly, the message should include recommended coping responses that help alleviate the threat. Simply being aware of a threat's existence, without knowing how to regulate one's behaviour to avoid the threat, is of little value (Renner and Schwarzer, 2003:179).

In the first instance, however, a consumer's perceptions of their vulnerability to and the severity of a threat – otherwise known as perceived risk (Renner and Schwarzer, 2003:172) – can never be greater than perceived efficacy. Should that be the case, it is speculated that consumers will be overwhelmed by fear, to the point that their defensive mechanisms will be triggered (Turner, Rimal, Morrison and Kim, 2006:153). The point at which perceived risk is greater than perceived efficacy is referred to as the critical point (Gore and Bracken, 2005:39). This critical point symbolises the moment at which a fear appeal loses any chance of being successful. Therefore, a balance between these two constructs needs to be reached, as a fear

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appeal can only be effective if it is both threatening and efficacious (Maguire *et al*., 2010:347). Considering this discussion, it is only under these aforementioned conditions that protection motivation will be initiated.

The extent to which protective behaviours are carried out, is a function of the third component of the PMT model: the perceived efficacy of the recommended coping response (Rogers, 1975:98). In other words, the greater an individual's perceptions that the recommended coping response will be successful in overcoming the prevailing threat, the more likely it is that they will adopt the desired response. Specifically, the recommended response should not be too difficult, too costly or take up too much time to implement, as consumers will then be deterred from executing it (Murray-Johnson *et al*., 2001:337). However, one should also be aware of the fact that some individuals are simply not ready to desist from the negative behaviour that they engage in (Velicer, Prochaska, Fava, Norman and Redding, 1998). As a result, any attempts at recommending a specific response that is reasonable in terms of time, money and implementation ease, will be in vain. Perceived efficacy, therefore constitutes an important component of the PMT model.

The PMT model was later revised to incorporate a fourth component: the self-efficacy construct (Maddux and Rogers, 1983:470). Recognised as an invaluable consideration regarding any psychological change (i.e. behavioural intent) (Bandura, 1977:194-5), self-efficacy became an integrated component of the PMT model (Maddux and Rogers, 1983:470).

It is important to note that the PMT was the first fear appeal model to identify the four variables that collectively help to understand the elements that contribute to a successful fear appeal (Sheer and Chen, 2008:938). These four PMT components, namely probability of harm, severity of harm, response efficacy and self-efficacy, have subsequently been adopted as the components that are necessary for the successful use of fear appeal communication (Sheer and Chen, 2008:938).

(i) Probability of Harm

Probability of harm refers to a consumer's perceptions of how likely it is that a threat will occur (Rogers, 1975:93; Arthur and Quester, 2004:673). Otherwise known as an individual's perceptions of their susceptibility or vulnerability to a threat, these terms

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have been used interchangeably in the literature, as both refer to the likelihood of a threat occurring.

Importantly, a fear appeal must induce feelings of vulnerability (de Hoog *et al*., 2007:280). If consumers do not perceive themselves as being vulnerable to the threat, they will remain unmotivated and disengaged from protective behaviours, even if fully aware of the problem (Will, Sabo and Porter, 2009:58). A study conducted by de Hoog, Stroebe and de Wit (2005:32) provided support for this contention. More specifically, their study revealed that regardless of how severe a threat is, or how effective the coping response is deemed to be, consumers will not take protective action if they do not feel personally vulnerable to that risk (de Hoog *et al*., 2005:32; Weinstein, 1988:362).

Additionally, a study conducted by Weinstein (1988:362), which was designed to measure respondents' perceptions of risk susceptibility in relation to a number of risks, revealed that respondents consistently acknowledged the vulnerability of others, rather than themselves. As a result, these respondents would feel no obligation to respond to the prevailing threat as they do not recognise themselves as being at risk. This feeling of invulnerability, otherwise known as comparative optimism, can be described as the tendency for people to perceive the risk for themselves as lower than that of their peers (Renner and Schwarzer, 2003:175; González-Iglesias, Gómez-Fraguela and Sobral, 2015:346).

Similar results of invulnerability have been reported in other studies, specifically in the realm of road safety. A study by Finn and Bragg (1986:289) found that young drivers perceived their peers as being more vulnerable to having an accident, than themselves. Additional findings from this study revealed that older drivers perceived themselves as being equally as vulnerable as their peers. Matthews and Moran (1986:310) further confirmed Finn and Bragg's (1986:289) findings.

Therefore, for fear appeals to work it, is of particular importance that consumers recognise the extent to which they are vulnerable to a threat. Resultantly, probability of harm is a factor that is crucial in a consumer's decision to engage in protection motivation, as well as an important prerequisite for behavioural change (de Hoog *et al*., 2007:280; Will *et al*., 2009:58). As a result, perceived vulnerability should be a valued component in every fear appeal message.

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Caution, however, is warranted when using the terms vulnerability or susceptibility in place of the term 'personal relevance' (Ruiter *et al*., 2001:620). The reason for this caution is that while an individual may perceive drinking-and-driving as a relevant threat to them, they may not accept that they are susceptible to the negative consequences associated with drinking-and-driving.

(ii) Severity of Harm

Originally referred to as the magnitude of noxiousness (Rogers, 1975:99), severity of harm refers to an individual's perceptions regarding the seriousness of the threat (Gore and Bracken, 2005:29). It is important that an individual considers a threat to be severe, otherwise their motivation to engage in protective behaviours will be lacking. That is, if an individual does not believe that drinking-and-driving results in serious consequences such as injury and loss of life, they will be less likely to adapt their behaviour.

The lack of motivation that might be initiated under conditions of low perceived severity relates to the processing of a message. De Hoog *et al*. (2005:30) conducted a study on the impact of fear appeals on message processing, revealing that under conditions of high perceived severity, the coping response information was processed deeply rather than in a shallow manner. This finding by de Hoog *et al*. (2005:30) demonstrates the important role that severity plays in fear appeal communication. Essentially, when perceived severity is high, consumers are better able to process the message along the central route of persuasion, and in doing so, fully recognise the extent to which the prevailing threat is severe.

(iii) Response Efficacy

Response efficacy is an individual's perception of the extent to which the recommended coping response is effective in deterring the current threat (Rogers, 1975:93; Maloney, Lapinski and Witte, 2011:208). The inclusion of response efficacy in any fear appeal communication is of the utmost importance (Lewis *et al*., 2008:405; van't Riet and Ruiter, 2013:S105).

A study by Lewis *et al*. (2008:464) found response efficacy to be a pivotal cognitive construct that influences the effectiveness of emotion-based appeals. More specifically, in terms of fear appeals, response efficacy functions to minimise

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message rejection. Therefore, the stronger a consumer's response efficacy perceptions, the more intensely they believe in the recommended response being able to overcome the threat. In turn, the consumer will exhibit lower intentions of message rejection as well as higher levels of intention to alter their behaviour accordingly.

In terms of drinking-and-driving, an example of a standard recommended coping response is to call a taxi after drinking an amount of alcohol that exceeds the legal limit. Should consumers perceive this coping response to be effective in overcoming the threats that drinking-and-driving pose, they are more likely to adopt the recommended response, resulting in behavioural change.

(iv) Self-efficacy

Lastly, self-efficacy can be defined as an individual's self-belief in their ability to perform a behaviour (Bandura, 1977:193; Rogers, 1983:169). In other words, self-efficacy is an individual's perceived capacity to call a taxi after excessive alcohol consumption, rather than getting behind the wheel.

This component has been identified as the most important of all the fear appeal components (Rogers, 1983:170; Snipes, LaTour and Bliss, 1999; Cismaru *et al*., 2009:7). This title of superiority has been earned as a result of the component's ability to moderate all processes of psychological change (Rogers, 1983:169).

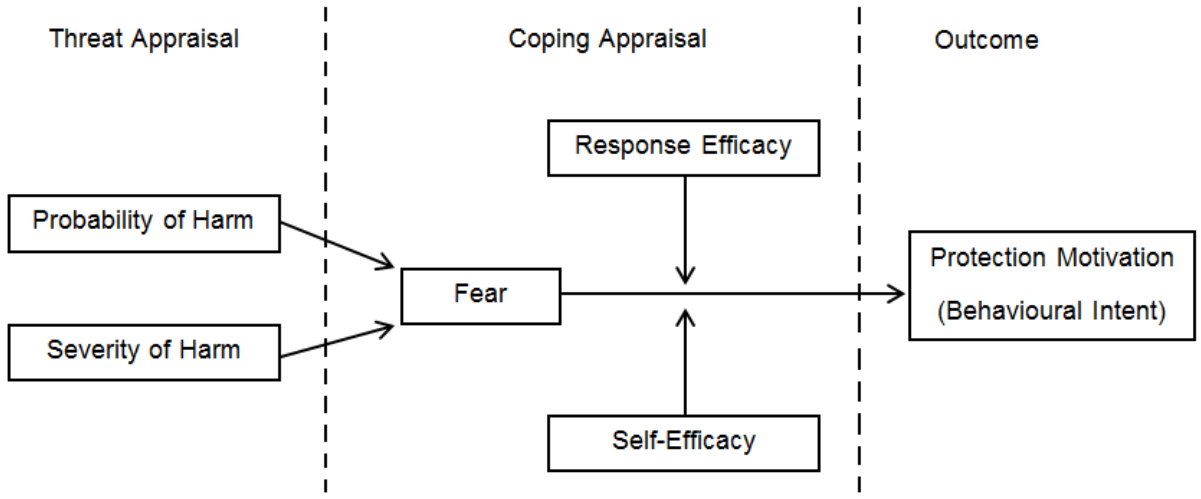
In other words, self-efficacy is considered to be an essential component in successfully stimulating behavioural change, as it significantly impacts the way in which consumers respond to persuasive fear-based messages (Manyiwa and Brennan, 2012:1420-2). The reason why this component is deemed to be so important, is that while a consumer can perceive a threat to be severe, feel personally vulnerable and believe that the recommended coping response will abate the threat, if they do not feel that they have the ability to implement the coping response, no behavioural change will occur.

Once a consumer possesses self-efficacy, the strength of this self-efficacy is another point of concern. That is because the stronger an individual's perceived self-efficacy is, the more active their efforts will be in terms of implementing the recommended behaviour (Bandura, 1977:194).

Importantly, as emphasised by the PMT model, the four fear appeal components are predominantly cognitive-based. This primary focus on the consumer's mental abilities was supported by Rogers (1975:99), who at the outset, alluded to the cognitive focus of the PMT model. It was in this frame of mind that he suggested that an individual's cognitive abilities were the sole determinant of their behavioural decisions when faced with a fear-laden message. In other words, Rogers (1975:99) proposed that an individual's appraisal of a fear appeal was exclusively based on their cognition. This proposal therefore, ignores the role that emotions play in persuasive attempts, as well as the emotional nature of fear.

In an attempt to address these shortcomings, Tanner *et al*. (1991:38) suggested that the two PMT processes were sequential rather than parallel, beginning with the threat appraisal process. They further argued that a necessary outcome of the threat appraisal was the arousal of fear, as this would initiate the secondary appraisal process: the coping response (Tanner *et al*., 1991:37). Arthur and Quester (2004:681) agreed with this revision of the PMT. They proposed that fear is a necessary outcome of a threat appraisal due to its ability to initiate behavioural change through the increased attention to, and acceptance of, a persuasive message. As a result of their conviction regarding this revised PMT, Arthur and Quester (2004:680) proposed a model that would encapsulate the above argument, as well as the addition of the self-efficacy component. This modified PMT model is illustrated in Figure 3.4.

Figure 3.4 The Modified PMT Model



Source: Adapted from Arthur and Quester (2004:680)

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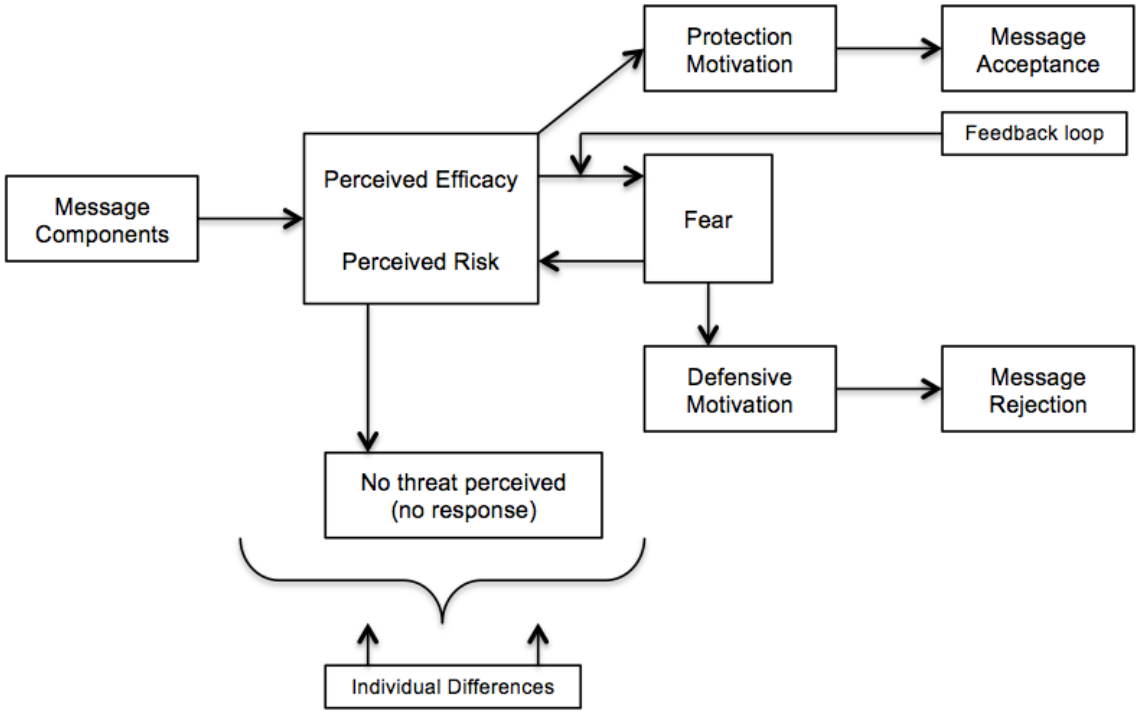
From Figure 3.4 it is evident that the components of the modified PMT have remained the same as the original PMT components. The only differences in Figure 3.4 relate to the addition of fear as an outcome of the threat appraisal, the depiction of the self-efficacy component in the PMT model, as well as the sequential representation of the threat appraisal and coping appraisal processes.

Given that this revision of the PMT acknowledges the emotional nature of fear, and the role that it plays in effecting behavioural change, the modified PMT was selected as the theoretical basis of this study. Henceforth, the term 'PMT' shall refer to the modified PMT model.

(b) The Extended Parallel Process Model

The extended parallel process model (EPPM) is the most recent fear appeal model (Gore and Bracken, 2005:28). As the name suggests, the EPPM is an adaptation of the original parallel process model and is presented in Figure 3.5.

Figure 3.5 The Extended Parallel Process Model



Source: Adapted from Manyiwa and Brennan (2012:1423)

As can be seen from the model, Leventhal's parallel process model serves as the foundation on which the EPPM is built. This is evident from the two processes which are depicted in the model, namely protection motivation (i.e. the danger control

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process) and defensive motivation (i.e. the fear control process) (Witte and Allen, 2000:594; de Hoog *et al*., 2007:260). More specifically, the EPPM draws on research from previous models, incorporating these theories to explain each of the aforementioned processes. The PMT is used to explain the danger control process, while certain aspects of the fear-as-acquired drive model are used to explain the fear control process (Witte and Allen, 2000:594; Gore and Bracken, 2005:28). Seeing that the model utilises these different theoretical bases, each of which has been discussed throughout this chapter, a further discussion of the EPPM will be superfluous.

For instance, it is evident from Figure 3.5 that the EPPM makes use of the four PMT components and their subsequent categories: perceived threat (otherwise known as perceived risk) which consists of perceptions of vulnerability to and severity of a threat; and perceived efficacy, which comprises of response and self-efficacy. Each of these processes are important in understanding the outcomes of the EPPM model.

As shown in Figure 3.5, there are three possible outcomes of the EPPM: protection motivation, defensive motivation or no response (Maloney *et al*., 2011:206). As with the PMT, when consumers are faced with a threat, they will assess the extent to which they feel that the threat is severe and that they are vulnerable to it. If a consumer does not perceive the existence of the risk, no further response will be forthcoming (Witte and Allen, 2000:594; de Hoog *et al*., 2007:260). However, should perceived risk be high, fear will result, therefore motivating the consumer to take some form of action to alleviate their perceptions of risk (de Hoog *et al*., 2007:260). It is at this stage that coping appraisal begins (Witte and Allen, 2000:594).

In the event that a consumer believes a recommended coping response to be effective and that they possess the ability to implement this coping response, protection motivation will be initiated (Witte and Allen, 2000:594; Cummings, 2012:33). In other words, the consumer will be motivated to engage in behaviours which control the sense of danger that was aroused. However, if perceived efficacy is lacking, consumers will engage in behaviours that control the arousal of fear. In other words, fear control processes will be initiated, which include engaging in defensive mechanisms such as message avoidance and denial (Witte and Allen, 2000:594; Cummings, 2012:33).

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(c) Contrasting the PMT and EPPM

Both the PMT and EPPM models are similar, in that they incorporate perceived risk and perceived efficacy as a means of explaining how fear appeals can lead to behavioural change (Manyiwa and Brennan, 2012:1422). However, where the PMT places emphasis on only one form of motivation, namely protection motivation, the EPPM distinguishes between two: protection motivation and defensive motivation.

While both the PMT and EPPM have been used extensively as a social marketing tool for behavioural change, the PMT model will form the theoretical underpinning of this study. Not only is the PMT widely accepted as a comprehensive model for health communication (Shehryar and Hunt, 2005:276; Cismaru *et al*., 2009:7), but it has also been used to facilitate a number of successful interventions (Floyd *et al*., 2000:420; Cismaru *et al*., 2009:19).

Milne, Sheeran and Orbell (2000:133-4) conducted a meta-analysis of PMT empirical studies across a range of health-related areas. After analysing 27 studies and a total of 7 694 individuals, the results of the review provided support for both cognitive appraisal processes of the PMT. Specifically, the PMT's threat and coping appraisal processes were found to predict health-related intentions and were significantly associated with concurrent behaviour.

Floyd *et al*. (2000:407) conducted another meta-analytic review of the PMT. The analysis of 65 studies representing 20 different health issues subsequently confirmed Milne *et al*.'s (2000:133-4) findings. Specifically, all the PMT variables produced statistically significant effects, indicating that any change in protection motivation resulted from the respective changes in the components of the PMT. In other words, changes in each component of the PMT can be linked to desirable outcomes, such as positive changes in behavioural intent (Floyd *et al*., 2000:420). Consequently, the PMT is a viable model on which social marketing campaigns can be based.

3.3 A MODEL FOR THE CURRENT STUDY

For a fear appeal to be successful, a consumer first needs to perceive that a risk is relevant to them (Witte and Allen, 2000:594; Öhman, 2008:710; Williams, 2012). Therefore, perceived risk constitutes an important consideration of any fear appeal message.

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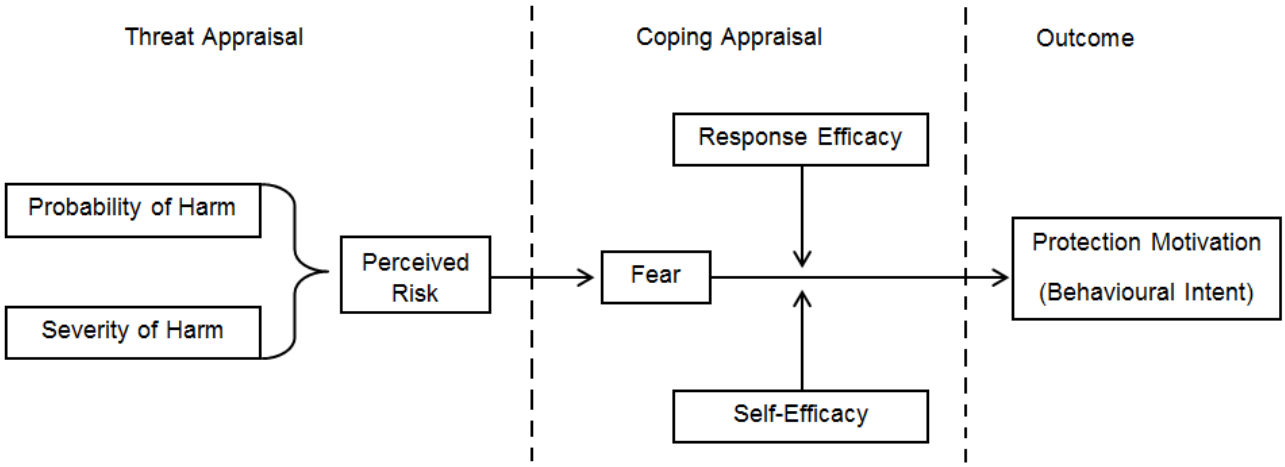
3.3.1 Perceived Risk

According to Jonah (1986:263) as well as Rothman and Salovey (1997:5), perceived risk can be defined as the perceived probability associated with a specific outcome occurring, or the likelihood that the event will be negative in nature. In terms of drinking-and-driving behaviour, perceived risk can be defined as a consumer's perceptions that the risks of this behaviour are austere (i.e. the consequences are negative and of a serious nature) and that they are vulnerable to this risk when they do drink-and-drive.

Given that perceived risk has been described as consisting of vulnerability and severity (Renner and Schwarzer, 2003:172; Turner *et al*., 2006:143), it is an important element of the threat appraisal process in the PMT model. Figure 3.6, therefore demonstrates the position of perceived risk in the PMT model.

Figure 3.6 Perceived Risk in the PMT Model



Source: Adapted from Arthur and Quester (2004:680); Renner and Schwarzer (2003:172)

The terms perceived threat and perceived risk are used interchangeably in the fear appeal literature to explain the sum of a consumer's perceptions of vulnerability to and severity of a threat. Considering the aforementioned discussions, namely that a threat is external and that the processes of the PMT are internal, the term perceived risk has been selected for use in this study. This decision was reached based on two premises. Firstly, while a certain threat might be apparent, a consumer's perceptions of the risk posed by the threat, is what stimulates the arousal of fear and initiates the

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efficacy process. Secondly, perceived risk will be used in this study to avoid any potential confusion between the external and internal processes of the fear-behaviour change relationship.

3.3.2 Types of Risk

Six types of risk have been identified, namely financial, performance, psychological, time, physical and social risks (Jacoby and Kaplan, 1972; Stone and Grønhaug, 1993:41). However, these risk types have largely been identified in respect of commercial marketing, focusing on product or service categories, rather than in respect of social marketing and fear appeals.

In light of the fact that fear appeals are used to alter socially undesirable behaviour, only those risks that have been previously used for this purpose were considered in this study (Kohn *et al*., 1982:463; Smith and Stutts, 2003:160; Chung and Ahn, 2013:453). Therefore, this study investigated the differential impact of both physical and social risks on consumers' protection motivation behaviour, with the former being defined as the threat to one's physical body, health and life, and the latter representing the threat of social rejection or isolation.

Thus far, the findings as to which type of risk – physical or social – is more effective in evoking behavioural change by means of fear-based messages, have proved inconclusive (Rayner *et al*., 2014:62). Specifically in the realm of drinking-and-driving, fear appeals that use the threat of a physical risk, such as death or serious injury, have been found to be ineffective in altering their intended audience's (i.e. males) behaviour (Lewis *et al*., 2007:207-8). Given that young males have been found to engage in dangerous road behaviour such as speeding and drinking-and-driving, to a greater extent than females (Harré, Field and Kirkwood, 1996:163-4), they are generally considered to be the target audience of road-related fear appeals (Sibley and Harré, 2009:160; Viljoen *et al*., 2009:120).

However, most road-related fear appeals which target young male drivers, place emphasis on the physical risks associated with drinking-and-driving. Specifically, physical threats of death and serious injury are used to arouse fear in male consumers, in an attempt to motivate them to desist from the dangerous behaviour they are engaging in (Donovan and Henley, 2003:88; Lewis *et al*., 2007:50).

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Despite evidence that males are less likely to respond to physical threats than their female counterparts, road-safety fear appeals continue to utilise physical threats. In doing so, these fear appeals are made to be ineffective, further contributing to young drivers' (and especially young males') continued engagement in dangerous road behaviour, such as drinking-and-driving (Lewis *et al*., 2007:207-8). This phenomenon of young males responding poorly to physically-based fear appeals has been reported in a number of studies (Lewis, Watson and Tay, 2007:50; Viljoen *et al*., 2009:120; Glendon and Walker, 2013:68).

Specifically, Tay (2002:195) conducted a study to investigate the effectiveness of a specific road safety campaign on risk perceptions and behavioural intentions of both target and non-target audiences. Findings from this study support the argument that young males respond less to physical threats, as their perceptions of risk relating to fatal and injury-causing accidents revealed smaller changes than that of other drivers (Tay, 2002:198).

In a similar vein, a study by Lewis *et al*. (2007:57) confirmed Tay's (2002:198) findings by exploring the third-person effect (TPE), or a person's tendency to view a persuasive message as having a greater influence on third parties rather than on themselves. In other words, males viewed the persuasive road safety advertisements as having a greater influence on others, while females demonstrated the opposite effect (Lewis *et al*., 2007:57). This finding suggests that males regard physical threats as less relevant and influential than females. Resultantly, they are less persuaded by these physically-based fear appeals.

According to Laroche *et al*. (2001:314) very few studies have investigated the differential impact of physical and social risks on consumer's intentions. As a result, this study attempts to address this gap in the literature, by investigating whether physical and social risks impact a consumer's protection motivation differently. The investigation of different types of risk and gender will also be considered.

3.4 SYNOPSIS

This chapter has delved into the theory regarding fear appeals, thereby cultivating a strong understanding of this concept, as well as its origins and components. The scope of this chapter was divided into three main sections.

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The first section focused on a general understanding of the concept, thereafter tracing the original models that initiated fear appeal research. The second section developed by tracing modern-day fear appeal models, how they adapted over the years as well as explaining its various components. Finally, the last section identified the model that was used for the present study, placing emphasis on the role of different perceived risks in terms of consumers' protection motivation.

This chapter concluded by identifying one of this study's main goals: to investigate the role that different physical and social risks, as well as gender, might have on consumers' protection motivation. While this objective is prominent and deserves consideration, the main objective of this study will be addressed in the following chapter. Therefore, Chapter 4 will devote specific attention to creating an impenetrable argument for the main objective of this study. Specifically, the negative consequences and inconclusive findings of fear appeals will be discussed, with emphasis being placed on the different types of fear appeals that may be used to create more effective persuasive messages.

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CHAPTER 4

USING ALTERNATE FEAR APPEAL APPROACHES

4.1 INTRODUCTION

Fear appeals have been used extensively in an effort to adapt socially undesirable behaviour such as drinking-and-driving (Janis and Feshbach, 1953:78; Witte and Allen, 2000:591; de Hoog *et al*., 2007:258; Ruiter *et al*., 2014:63). The use of fear appeals have resulted in a number of positive outcomes, such as increased interest in the message, increased involvement, improved recall and persuasiveness (Williams, 2012).

In light of the positive effects that fear appeals can have, Chapter 3 was dedicated to providing a theoretical understanding of this fear-based persuasive method. However, several fear appeal-related topics merit further attention. Specifically, the inconclusive findings of fear appeals, as well as the negative consequences that might arise due to the use of fear in persuasive communications, needs to be addressed. It is in this light that this chapter will review the literature regarding three main aspects.

In the first instance, the conflicting evidence of fear appeal findings will be discussed, where after the emphasis will be placed on the reasons as to why fear appeals have been ineffective: defensive mechanisms. The final focus of this chapter will be providing an argument for the use of alternate fear appeal strategies, in an attempt to overcome the negative effects that do inevitably occur with the use of fear-laden persuasive messages. To achieve this latter objective, the use of question-based – as opposed to statement-based – fear appeals will be proposed.

4.2 INCONCLUSIVE FEAR APPEAL FINDINGS

Chapter 3 detailed the extensive use of fear in persuasive messages to encourage behavioural change. Despite the widespread use of fear appeals, their effectiveness has been a topic of dispute for over 55 years (Rayner *et al*., 2014:64). This qualm regarding the success of this persuasive method is due to the inconsistent findings in the fear appeal literature.

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These inconsistent findings relate to the level of fear that should be evoked, as well as the general use of fear appeals. In the first instance, conclusive evidence regarding the level of fear that should be evoked, has not been found. Some findings suggest that high fear is more effective and should be used in place of lower levels of fear, while others recommend the opposite (Kohn *et al*., 1982:457). Specifically, a study by Dabbs and Leventhal (1966:525), as well as previous meta-analytic fear appeal reviews, provide strong support for high levels of fear over low fear levels (Witte and Allen, 2000:601; de Hoog *et al*., 2007:264). By contrast, Janis and Feshbach (1953:92) as well as Krisher *et al*.'s (1973:301) findings, support the use of moderate rather high levels of fear. Despite these contrasting findings, there is a general advocation for the use of high as opposed to lower levels of fear in social marketing.

In the second instance, some authors suggest that fear appeals are the best method for evoking behavioural change (Lewis *et al*., 2007:206; Lee and Park, 2012:2; Rayner *et al*., 2014:61; Nabi, 2015:115; Witte and Allen, 2000:605-6). Specifically, the arguments in support of fear appeals indicate that consumers who are exposed to fear-based communications, report them to be more effective than other forms of persuasive communication, such as informational and other emotional appeals (Lewis *et al*., 2007:206; Rayner *et al*., 2014:61). Moreover, fear has been identified as a particular influence regarding decision-making processes in terms of attitudinal and behavioural change (Nabi, 2015:115).

In 1999, Chapman (1999:1508) reported the findings of the Australian social marketing campaign, "Every cigarette is doing damage". Having been implemented from June to November 1997, Australia's smoking rate decreased from 25 per cent to 22 per cent. Similarly, the "If you drink-and-drive, you're a bloody idiot" campaign that was launched in Victoria, Australia in 1989 helped to decrease the fatalities resulting from drinking-and-driving (Transport Accident Commission, 2015). Campaign results revealed that a total of 114 deaths in 1989, was reduced to 42 in 2009.

Despite some findings that support the argument in favour of fear-based messages, the use of fear appeals are laden with messages of caution – even by those who advocate for its continued use. This need for caution arises due to the nature of fear and the tendency for unintended negative effects to occur as a result of this negatively valenced emotion. In other words, while some support the use of fear

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appeals, others are strongly of the opinion that this persuasive method should not continue to be implemented, as it results in negative consequences (Thompson *et al*., 2009:184; Manyiwa and Brennan, 2012:1420-1; Peters *et al*., 2014:71-2). More specifically, findings suggest that fear appeals may result in undesirable behaviour such as message avoidance and rejection, and even an upsurge in the undesirable behaviour (Prevention First, 2008:6; Manyiwa and Brennan, 2012:1421).

A study by Lennon, Rentfro and O'Leary (2010:108) found evidence that fear appeal communications, which are designed to stop and prevent further engagement in undesirable behaviour, can have the opposite effect. More specifically, the results from this study revealed that after being exposed to public service advertisements which targeted negative driving behaviours, respondents indicated an increased likelihood of engaging in the said-behaviours (Lennon *et al*., 2010:104). In other words, respondents were more likely to partake in undesirable driving behaviour such as talking on a cellphone and texting while driving, than before exposure to the public service advertisements.

Considering these aforementioned findings, some believe that instead of using fear appeals, the focus should be placed on alternate methods of persuasion – hence the recent concentration on humour-based appeals in the realm of road safety (Lewis *et al*., 2008:413; Lewis, Watson and White, 2010:459-460).

These aforementioned conflicting views form two schools of thought about the use of fear appeals (Lewis *et al*., 2007:203). While proponents of each view differ in their sentiments regarding whether to use fear-laden communications or not, both agree that many factors affect the relationship between fear and persuasion (Lewis *et al*., 2007:203-4). The difference between these two views then comes into play where proponents of the former view emphasise the fact that fear needs to be utilised under the correct conditions. These proponents stress the importance of understanding the factors that influence the fear-persuasion relationship, as doing so increases the prospect of fear appeal effectiveness. Contrastingly, advocates of the latter view consider the use of fear appeals too precarious, due to the existence of too many intervening variables.

While both schools of thought hold their merits, the former view – namely that fear appeals are a viable tool for persuasive communication provided that they are used

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with caution and under the correct circumstances – continues to receive support and lends itself as a means for further investigation in this study. In other words, while fear appeals may result in negative consequences and the findings regarding their effectiveness have been largely inconclusive, they are still an important consideration concerning behavioural change as they have been found to motivate attitude, intention and behaviour change (Witte and Allen, 2000:605). Consequently, fear appeals as a means for social marketing merits further investigation. Importantly, the fact that current fear appeals have been found to be ineffective is the prime reason for this study being conducted. Research has indicated that marketing and society at large, need successful fear appeals to be designed, and more so that they are designed based on a sound theoretical basis (Gore and Bracken, 2005:39).

The present study intends to answer this marketing and societal need for more effective and theory-based fear appeals by examining two different approaches to using fear in persuasion. However, before this main concern can be addressed, it is necessary to first understand why fear appeals result in negative consequences as well as what these consequences are.

4.3 INHIBITING FEAR APPEAL EFFECTIVENESS: DEFENSIVE MECHANISMS

A key obstacle that researchers have encountered when striving to change consumers' behaviour, is that many people tend to resist persuasive attempts (Sweeney and Moyer, 2015:149). This resistance can be ascribed to an individual's inherent objection to being told what to do (Blanc and Brigaud, 2014:670). Considering that social marketing uses fear appeals to disseminate information aimed at evoking behavioural change, it is possible that this fear-based message might lead consumers to resist persuasive attempts. These efforts aimed at resisting fear appeals are known as defensive mechanisms – an outcome which impacts the effectiveness of fear appeals.

Chapter 3 indicated that the critical point – that is, where perceived risk is greater than perceived efficacy – signifies the moment where an individual is likely to engage their defensive mechanisms (Turner *et al.*, 2006:153). In other words when the level of fear aroused is high and efficacy is low, consumers will partake in defensive reactions (Tay, 2002:199). Witte and Allen (2000:591) conducted a meta-analysis of the fear appeal literature, in which this premise was confirmed. Specifically, Witte and

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Allen (2000:601) found that a total of 13 studies had assessed the relationship between fear appeal strength and defensive reactions. Their results revealed that as the strength of a fear appeal increases, so too does a consumer's defensive responses. Moreover, the weaker a consumer's perceived efficacy, the more substantial the defensive reaction will be. While the dominant manner in which defensive mechanisms are brought about (i.e. the evocation of high fear levels without sufficient efficacy) has been discussed, there are a number of factors which influence the extent to which perceived risk is greater than perceived efficacy.

The determinants which influence levels of perceived risk include perceptions of vulnerability and severity of harm (Renner and Schwarzer, 2003:172). Another important consideration is personal relevance (Ruiter *et al*., 2001:626). A threat needs to be perceived by its intended audience as being relevant to them (Lewis *et al*., 2007:207). For instance, if a consumer does not drink-and-drive, they will not feel vulnerable to the threat or perceive it as being severe. Subsequently, fear will not be aroused and the consumer will remain unmotivated to act.

Nonetheless, in some instances the more personally relevant a threat is, the greater the likelihood of a consumer's defensive reactions being engaged (Good and Abraham, 2007:209; van't Riet and Ruiter, 2013:S104). This occurrence is demonstrated in a study by Kunda (1987:644). Essentially, those who perceived a threat as highly personally relevant, were less persuaded than the respondents who had a lower perception of the relevance of the threat. Similarly, a study that linked caffeine consumption to breast disease showed that female coffee drinkers reacted more defensively to the proposed message than females who did not consume coffee (Liberman and Chaiken, 1992:669; Petty, Wegener and Fabrigar, 1997:617; Good and Abraham, 2007:209).

Therefore, fear appeals that use personal relevance, may at times lead to defensive reactions, particularly for those for whom the threat is most relevant (Kessels, Ruiter and Jansma, 2010:346; van't Riet and Ruiter, 2013:S106). In the realm of drinking-and-driving, males have been found to be at higher risk of accident involvement than their female counterparts (Fry, 2006:4; Viljoen *et al*., 2009:119-120). Despite their increased risk, males are the least responsive to fear appeals that are targeted at them (Sibley and Harré, 2009:159-160).

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Importantly, personal relevance does not always result in defensive reactions. Rather, if a threat is too relevant and consumers feel powerless to control their perceptions of risk, their behaviour will be defence-oriented (Lewis *et al*., 2007:208). Therefore, while personal relevance is important for perceptions of risk, it may also lead to the initiation of defensive reactions, particularly for those who are most at-risk.

4.3.1 Types of Defensive Mechanisms

The literature suggests that there are five main types of defensive reactions to threats: avoidance, denial, cognitive reappraisal, suppression and psychological reactance.

(a) Avoidance

Avoidance is defined as the directing of one's attention away from a threatening stimulus (van't Riet and Ruiter, 2013:S111). Triggered by emotive stimuli, avoidance is regarded as an unconscious defence mechanism and is usually practised by focusing one's attention on other stimuli or engaging in unrelated and taxing activities (van't Riet and Ruiter, 2013:S111). Evidence supporting the claim that avoidance is one of the defensive mechanisms that consumers engage in, can be found in a study by Kessels *et al*. (2010:352). The study used neuro-scientific techniques and discovered that smokers avoided high-threat messages more than low-threat messages.

According to Wiebe and Korbel (2003:185), avoidance is not a suitable defensive mechanism. Typically, consumers are exposed to persuasive health messages repeatedly, thereby making it difficult for them to avoid all of these persuasive messages. Consequently, avoidance is unlikely to represent a serious threat to behavioural change in the long run (van't Riet and Ruiter, 2013:S111).

(b) Denial

Denial stems from a consumer's motivation to curb the negative emotions that a threatening communication arouses. This defensive mechanism allows for consumers to protect themselves from threatening messages by neutralising the persuasive message (Wiebe and Korbel, 2003:185; Thompson and Ting, 2012:620).

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The neutralisation of a message can take place in two ways: dismissal of the information or actively analysing the information for errors (van't Riet and Ruiter, 2013:S111).

Denial has been documented as being a crucial factor in the continued practice of risky behaviour and the subsequent lack of intent to change behaviour (Thompson and Ting, 2012:620). Denial is thus a dangerous defensive mechanism, as essential information to behavioural change is dismissed or not recognised as being truthful (van't Riet and Ruiter, 2013:S111). For instance, should consumers find fault with, or dismiss a message that states drinking-and-driving is harmful to society, they will continue to engage in this deviant behaviour. Doing so not only puts the consumer at risk, but all of those who come into contact with them. However, similar to avoidance, denial has been identified as an ineffective defence strategy after more than one exposure (van't Riet and Ruiter, 2013:S111).

(c) Cognitive Reappraisal

Cognitive reappraisal can be defined as interpreting a potentially emotional situation in a non-emotional manner (Gross, 2002:283). In other words, not only does an individual deny that they are at risk, they further adopt additional beliefs so that the threat is perceived as being more manageable (van't Riet and Ruiter, 2013:S111). Three ways in which to better manage a threat (i.e. cognitively reappraise it) have been identified.

In the first instance, fear appeals typically target a health-related issue. Therefore, consumers will downplay the extent to which being healthy matters, as opposed to the positives that they associate with the deviant behaviour (van't Riet and Ruiter, 2013:S112). For example, an individual who drinks-and-drives might say that they value having a good time with friends, over the potential risks of drinking-and-driving. Secondly, a consumer might use their religious beliefs as a way to assuage the implications of a threatening message (van't Riet and Ruiter, 2013:S112), with such statements as 'my life is in God's hands'. The final consideration is that of downward social comparison, where consumers use the actions of others who are in a worse state, to justify their own behaviour (Taylor and Lobel, 1989:569; van't Riet and Ruiter, 2013:S112).

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Unlike denial and avoidance, which have been found to be ineffective after repeated exposure to a fear appeal, cognitive reappraisal has been identified as posing a greater risk to behavioural change attempts (van't Riet and Ruiter, 2013:S125). This defensive mechanism not only acknowledges the truth of a persuasive message, but additionally adopts specific beliefs which prevent the threatening information from destabilising a consumer's positive conceptualisations about themselves (van't Riet and Ruiter, 2013:S124).

Cognitive reappraisal is not to be confused with cognitive dissonance. When an individual's self-image is threatened, cognitive dissonance occurs (Müller *et al*, 2014:257). In other words, cognitive dissonance results when an individual holds two conflicting cognitions at the same time (Glock and Kneer, 2009:357). More specifically, van't Riet and Ruiter (2013:S110) suggest that dissonance arises when the cognition that refers to the behaviour is at odds with the cognition that refers to the negative consequences of such behaviour. For example, should a person hold two conflicting cognitions, namely that they drink-and-drive and also that drinking-and-driving is dangerous and results in serious consequences, cognitive dissonance could arise. For a consumer to realise that their behaviour is endangering their health would certainly result in cognitive dissonance (Gibbons, Eggleston and Benthin, 1997:185).

Furthermore, cognitive dissonance is the starting point of a consumer engaging in defensive reactions. The dissonance created by a consumer's awareness that they are putting themselves in harm's way, arouses their need to engage in defensive reactions. Therefore, any of the five identified types of defensive mechanisms might be employed when a consumer experiences dissonance (van't Riet and Ruiter, 2013:S110).

(d) Suppression

Suppression is defined as impeding both threatening information as well as emotionally expressive behaviour (Gross, 2002:283; van't Riet and Ruiter, 2013:S112). Considered to be an automatic, subconscious response, suppression includes engaging in activities that help to quell the emotional responses evoked by fear appeals (Ruiter *et al*., 2001:622; van't Riet and Ruiter, 2013:S112).

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The activities that are used to facilitate suppression may take many forms. Firstly, one can attempt to hide their fear after exposure to a fear-laden persuasive message. Alternatively, consumers can use substances such as drugs and alcohol to mollify the emotional responses that a fear appeal might cause (van't Riet and Ruiter, 2013:S112).

(e) Psychological Reactance

The psychological reactance concept was coined as a means to explain why individuals often do the opposite of what they were requested to do (Fogarty, 1997:1277). Psychological reactance implies that a consumer possesses a set of free behaviours that they are able to engage in. However, when any of these free behaviours are threatened, the consumer will engage in a motivational state aimed at restoring the threatened behaviour in question (Fogarty, 1997:1278). Therefore, defined as a motivational state, psychological reactance re-establishes the freedom that a consumer perceives to be threatened (Brehm and Sensenig, 1966:703).

Practically, a person may perceive their drinking-and-driving behaviour as a freedom that they are able to partake in. Nonetheless, when confronted with fear appeals that highlight the negative consequences of this behaviour, they would feel as if this behaviour is being threatened and engage in reactance. The outcome would therefore be increased motivation to engage in the undesirable behaviour in an effort to regain the freedom that they believe to be threatened. Such a response is known as restoration, whereby someone restores the freedom that was under threat (Grandpre *et al*., 2003:351)

The outcome of reactance, namely increased participation in the undesirable behaviour, is also referred to as the boomerang effect. This name was coined due to the oppositional nature of the outcome of some fear appeals. In other words, while fear appeals strive to effect behavioural change, in some instances, this persuasive method results in increased participation in the undesirable behaviour. This increased participation in the undesirable behaviour is due to the perceived risk increasing the attractiveness of the threatened behaviour, as well as the attempts to exercise this freedom (Fogarty, 1997:1278; Grandpre *et al*., 2003:351).

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Fogarty (1997:1278) believes that the intensity of reactance is determined by three factors: the magnitude of the threat, the number of freedoms being threatened, as well as the importance of the threatened behaviour. Moreover, when a threat to a freedom poses a further threat to other freedoms, the reactance that results will be even greater (Brehm and Sensenig, 1966:703).

Strong evidence of reactance was found in a study that was conducted by Shen (2014:9). This study validated the measurement and existence of psychological reactance by determining what constitutes a threat to freedom. More specifically, the use of explicit, controlling and forceful language was found to be an important antecedent of reactance.

In summary, while fear appeals are still a useful social marketing tool, the findings for current fear-based approaches have been largely inconclusive. These inconclusive findings are due in part, to the aforementioned defensive mechanisms. Therefore, to create effective fear appeals that do not result in defensive mechanisms, the use of alternate fear appeal approaches has been suggested.

4.4 ALTERNATE FEAR APPEAL APPROACHES

Currently, fear appeals are in statement form as exemplified by Figure 4.1. That is, the dangers associated with the deviant behaviour (i.e. drinking-and-driving as per the example), are stated plainly.

Figure 4.1 Current Fear Appeal Example

Up to this point, the discussion regarding fear appeals has made reference solely to those warnings that are statement-based. In other words, the use of statement-based fear appeals has been found to be ineffective due to the negative consequences that this approach results in.

Given the mounting literature regarding the ineffectiveness of current fear appeals, a new approach to fear appeals has been suggested. Glock *et al*. (2012:253) and Müller *et al*. (2014:453) suggest that fear appeals should be formulated as questions.

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That is, rather than stating that “Drinking-and-driving leads to serious bodily harm”, fear appeals should be reformulated to pose a question, such as “What are the consequences of drinking-and-driving on your physical health?”.

Thus far, only two studies have investigated the use of question-based as opposed to statement-based fear appeals. In both studies the findings showed that this alternate approach to the framing of fear appeals held great promise. The first study was conducted by Glock *et al*. (2012:253). This seminal study focused on whether question-based fear appeals could avoid defensive reactions. Smoking-related risk perceptions served as the context, whereby smokers were presented with one of the following formats: warnings formulated as questions, textual warnings, graphic warnings or no warning. Results indicated that question-based fear appeals can help circumvent defensive reactions by increasing respondents’ smoking-related risk perceptions. In other words, the use of fear appeals formulated as a question was found to be more effective in increasing smoking-related risk perceptions.

Müller *et al*.’s (2014:453) study focused on whether question-based as opposed to statement-based warnings would result in greater positive behavioural change. Smoking was again used as the context, where respondents were shown one of two movies: one whose subheadings relayed the consequences of smoking in question format, and the other in statement format. Once more, the results favoured the use of question-based fear appeals. More specifically, smokers who had been exposed to the question-based stimuli waited longer before lighting up a cigarette than the respondents who had viewed the statement-based stimuli.

From these findings, it was concluded that question-based fear appeals not only result in actual changes in behaviour, but they further allow for defensive reactions to be avoided. The aforementioned studies serve as the foundation on which the current study is built. Given that only two studies have investigated the use of question-based fear appeals, the present study hopes to contribute to the literature on this topic, by investigating the use of different fear appeal approaches on consumers’ protection motivation behaviour.

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4.5 USING QUESTION-BASED FEAR APPEALS

Glock *et al.* (2012:253) hypothesised that posing questions to consumers would reduce the unintended negative effects of fear appeals as consumers would produce their own answers, thereby internalising the message and increasing its effectiveness. This supposition was based on theory relating to self-generated arguments and the importance of personal relevance.

According to Strack and Mussweiler (1997:444), self-generated information is highly accessible and serves as a basis on which to form judgements. Subsequently, information that is easily accessible serves as an anchor for thought processes, thereby helping to facilitate decision-making (Hendriks *et al*., 2014:685). However, the ease with which information can be accessed alone, is not sufficient to guarantee that the information will be used (Strack and Mussweiler, 1997:44). Rather, in order to be used as a basis for judgements, information should be relevant.

Essentially, conclusions that are self-generated, rather than being provided by an external source, are more accessible from memory (Kardes, Kim and Lim, 1994:219). In turn, conclusions that can be recalled more easily from memory, have a greater influence on a consumer's decision-making abilities (Kardes *et al*., 1994:219; Mussweiler and Neumann, 2000:194). That is, consumers are more likely to believe, accept and act according to an argument that is internally generated, as opposed to an argument that is provided by an external source (Mussweiler and Neumann, 2000:194; Grandpre *et al*., 2003:362). This outcome is due to an individual's perceptions that self-generated arguments are more truthful and valid (Kardes *et al*., 1994:219-220). As a result, self-generated arguments are less likely to be self-corrected (Mussweiler and Neumann, 2000:198).

Not only do consumers have greater confidence in their own conclusions, but the credibility of an external source is questionable when compared to an individual's perceptions of their own credibility. Credibility has been shown to play an essential role in communication (Sternthal and Craig, 1974:26) and fear appeal messages are no different. Therefore, should a consumer perceive a source to be highly credible (as is the case with self-generated arguments), the more believable and effective the persuasive message is likely to be (Reynolds and Seeger, 2005:45).

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Importantly, information that is self-generated allows consumers to develop an argument which they are able to accept, and perceive as personally implementable, much like self-efficacy. In other words, self-generated arguments increase a consumer's self-efficacy. Considering that the PMT cognitive processes (i.e. threat appraisal and coping appraisal) are internal processes, while a threat is external, it stands to reason that the internalisation of a message helps to increase the extent to which consumers perceive a risk and their ability to cope with it.

An interesting field of literature that deserves discussion is that of self-perception. Research conducted on self-perception shows that individuals draw conclusions about their inner states, based on observing their own behaviour (Bem, 1972:2; Müller *et al*., 2014:253). Evidence supporting the self-perception theory can be found in Bem's (1972:9-10) study. Respondents were asked to rate cartoons which they previously classified as neutral, as either being funny or unfunny. Two colour lights were used, with each colour representing either the 'truth' light or the 'lie' light. When the 'truth' light was illuminated, respondents had to answer truthfully. Alternatively, when the 'lie' light was illuminated, participants had to relay an untruthful answer. Results indicated that if a respondent had classified a cartoon as 'funny' when prompted to answer truthfully, the respondent believed that the cartoon was indeed funnier than they had previously indicated. Moreover, respondents changed their opinions significantly more under the truthful condition than under the 'lie' condition,

Adapting this theory to the current study, should consumers witness themselves arguing against the negative behaviour (e.g. drinking-and-driving is dangerous), they may be more convinced of the argument. In turn, they may be more inclined to adapt their behaviour accordingly, than if the argument were provided by an external source. With consumers being involved in the persuasive process, the extent to which they systematically process the message will increase, making it more likely that they will accept their self-generated argument as being a valid consideration on which to base their behavioural adaptation intentions.

Building on the findings from Carroll's (1978:88) study, Gregory, Cialdini and Carpenter (1982:99), demonstrated the importance of self-involvement regarding persuasion in four different experiments. The results for each experiment they conducted revealed that respondents who were asked to imagine a situation (thereby demonstrating higher levels of involvement), rated the situation as more likely to

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happen than respondents who had read or listened to the same situation. Müller *et al*. (2009:428) extended the research on the topic of self-involvement. Smokers were separated into two experimental groups. One had to generate their own arguments against smoking – representing high involvement in persuasion; the other was presented with anti-smoking arguments – representing low involvement in persuasion.

Müller *et al*.'s (2009:430) findings concur with Gregory *et al*.'s (1982:99) in that respondents who had to generate their own arguments (i.e. those more involved in internalising the message) abstained longer from engaging in the negative behaviour (smoking) than those who were less involved. Therefore, high involvement and the subsequent systematic processing of a message, helps to alleviate the negative consequences of defensive reactions, such as increased engagement in the undesirable behaviour. By virtue of the fact that a question requires actual involvement with a subject, the reformulating of fear appeal statements into questions, might increase the extent to which an individual thinks about the topic (Müller *et al*., 2014:253). Subsequently, their intrinsic motivation might be augmented.

The literature pertaining to self-generated arguments provides a robust foundation on which to advocate for the use of question-based warnings as more effective than those that are statement-based. By increasing a consumer's self-involvement and encouraging them to generate their own arguments, defensive reactions can be diminished. Given a consumer's inherent tendency to believe and more readily accept self-generated arguments, their self-efficacy to conquer the threat they are exposed to, increases. This outcome, coupled with the fact that self-involvement delays engagement in undesirable behaviour, helps to reduce the prospect of defensive reactions. In a similar vein, when consumers develop their own argument rather than being told what to believe, the extent to which they feel that their freedom is being threatened, is limited (Müller *et al*., 2014:257). Subsequently, motivation to engage in psychological reactance is reduced.

Personal relevance also affects the potential for defensive reactions. Section 4.3 pointed out that while relevancy can lead to defensive reactions, it is necessary for a consumer's perceptions of risk – the vulnerability to and the severity of a threat. The importance of a relevant argument is especially poignant regarding fear appeals. The

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relevance of a threat to an individual, determines their perceived level of risk, which in turn mediates the level of fear that is aroused.

In this regard, because question-based warnings allow consumers to generate their own, personally relevant arguments, and internalise this message against the negative behaviour, it is the consumers themselves who are able to determine the level of fear that is aroused (Glock *et al.*, 2012:257; Müller *et al*., 2014:257). This realisation is critical because when the level of fear aroused is too great, consumers will engage in defensive reactions. However, in the same way that a consumer will not generate an argument that is irrelevant to them, they will also not generate an argument that is too fearful. Therefore, by utilising question-based fear appeals, the defensive responses that are generated by the use of commonplace fear appeals will be mitigated against.

In a similar vein, question-based fear appeals might also help to reduce the frequency with and the amount of cognitive dissonance that is aroused. Because consumers can formulate their own arguments, which are based on personally relevant information, they are less likely to generate content which threatens their self-image. The less threatened their self-image is, the less defensive responses will be engaged, and the more likely consumers will be to consider altering their behaviour. Recent research in this respect has further discovered that question-based warnings positively influenced consumers' risk perceptions, as well as had a positive effect on short-term behaviour within the domain of smoking (Glock *et al.*, 2012:257; Müller *et al*., 2014:257-8). The findings of increased risk perception suggest that defensive reactions were not employed, thereby allowing the consumers to fully gauge the extent to which they are at risk.

In summary, the use of question-based warnings as a viable alternative to current fear appeals is evident. Internally-generated information allows a consumer to make their argument more personally relevant, and in doing so increases their perceptions of risk. Similarly, self-generated arguments increase the believability and acceptability of the argument, as the source possesses a high level of credibility. The sum of these outcomes indicates that the use of question-based fear appeals not only mitigates defensive mechanisms, but it further allows for socially desirable behavioural outcomes.

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4.6 SYNOPSIS

This chapter created an argument for the use of an alternate fear appeal approach, namely question-based warnings. To accomplish this objective, the inconclusive nature of fear appeal findings was discussed. This discussion served the purpose of highlighting two important considerations. Firstly, while current, statement-based fear appeals are used to effect behavioural change, they sometimes result in negative consequences. In the second instance, this resultant negative outcome calls the effectiveness of fear appeals into question.

Elaborating on the first discussion, the second section of this chapter was dedicated to developing a thorough understanding of the defensive mechanisms which inhibit the effectiveness of fear appeals. Specific attention was placed on how defensive mechanisms are brought about as well the five main types.

The last two sections, namely sections 4.4 and 4.5, marked the turning point of the literature review. Within these sections, the focus from statement-based fear appeals was transferred to the crux of this study: the use of question-based fear appeals. Examples of each fear appeal type were given, followed by empirically-supported reasoning as to why question-based fear appeals represent a well-grounded alternative to statement-based fear appeals. More specifically, the literature that indicates that question-based warnings successfully mitigate defensive responses, and thereby overcomes the limitation of current fear appeals, was given particular attention.

Based on the discussions in this chapter, one can conclude that more research is needed into the development of more effective fear appeals. As the literature suggests, question-based fear appeals provide a strong alternative to current fear-based messages. This theoretical foundation, serves as a solid point of departure on which to base the present study and the investigation into which fear appeal approach is more effective: statements or questions.

The following chapter will delineate the research design and methodology that this study adhered to. Emphasis will be placed on the primary research techniques that were undertaken, as well as elaborating on the sampling decisions that were made.

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CHAPTER 5

RESEARCH DESIGN AND METHODOLOGY

5.1 INTRODUCTION

In light of the inconclusive findings relating to current fear appeal approaches, question-based warnings have been suggested as a viable alternative and merits further investigation. Moreover, given the inconclusivity regarding which type of perceived risk is more influential on males' and females' protection motivation, these aspects also merit further investigation. As a result, this study was undertaken to investigate whether different fear appeal approaches and perceived risks influence consumers' protection motivation differentially.

This chapter is dedicated to detailing all considerations of this study's methodology. In the first instance, this study's problem definition and objectives will be reviewed, followed by a comprehensive recount of the research design that was adhered to. More specifically, the primary and secondary research methods that were followed will be discussed, proceeded by an in-depth explanation regarding this study's measurement instrument. The sampling process that was used is also examined, where after this chapter concludes by detailing the data analysis techniques that were implemented.

5.1.1 Problem Statement

Deviant behaviour, such as drinking-and-driving, is a constant problem for society (Hastings *et al*., 2004:961; Brandhouse, 2009; Avert, 2012; SAB, 2012). Throughout the world, thousands of people die each year as a result of this preventable health and safety risk (Greening and Stoppelbein, 2000:99; Cismaru *et al*., 2009:2), and the South African situation is no different (SADD, 2013; Arrive Alive, 2014). Despite the continued efforts of social marketing campaigns, whose purpose is to alter such undesirable behaviour by using techniques such as fear appeals, little change has been effected.

This lack of change has been attributed partly to the ineffective use of fear appeals, as findings on the effectiveness of fear appeals have been largely inconclusive. In this regard, some studies report findings of positive behavioural changes (Tay,

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2002:198; O'Hegarty *et al.,* 2006:467; Hammond *et al*., 2003:391), while other studies have found that fear-induced communications are ineffective (Kohn *et al*., 1982:462; Ruiter *et al.*, 2001:626; Prevention First, 2008; Glock *et al*., 2012:253). These latter studies highlight the fact that fear appeals may result in a number of defensive reactions, consequently limiting their effectiveness.

Current literature on fear appeals propose the use of different fear appeal approaches, as well as the use of different types of perceived risk, in order to overcome this deviant drinking-and-driving behaviour. Specifically, findings as to which perceived risk is more effective have also been largely inconclusive (Smith and Stutts, 2003:160). Some findings suggest that physical risk is more effective, while other findings indicate that social risk is more effective. Moreover, recent findings suggest that formulating warnings as questions, helps to overcome the unintended negative effects of fear appeals (Glock *et al.*, 2012:257; Müller *et al*., 2014:257). Additionally, some believe that question-based warnings are more likely to induce positive outcomes such as increased risk perceptions and behavioural change. However, research regarding question-based warnings has been limited.

Although the studies conducted by Glock *et al.*, 2012:257 and Müller *et al*., 2014:257 have investigated the impact that question-based warnings have on risk perceptions and short-term behaviour, research has yet to determine the impact that different fear appeal approaches (i.e. question-based warnings and statement-based warnings) and different types of perceived risk (i.e. physical and social) might have on behavioural intent.

Against this background, this study was conducted to assess the influence of different fear appeal approaches and risk perceptions on consumers' protection motivation behaviour. Given the novelty of using different fear appeal approaches in South Africa as well as in the domain of alcohol consumption, this study focused specifically on the South African context of drinking-and-driving.

5.1.2 Research Objectives and Hypotheses

This study consisted of seven primary research objectives and six secondary objectives, in accordance with the six PMT components, per each primary objective. In order of importance, this study sought to accomplish the following:

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(1) Investigate whether different fear appeal approaches influence consumers' protection motivation differently.

(2) Investigate whether different types of perceived risk influence consumers' protection motivation differently.

(3) Investigate whether different fear appeal approaches and different types of perceived risks influence consumers' protection motivation differently.

(4) Investigate whether gender influences consumers' protection motivation differently.

(5) Investigate whether gender and different fear appeal approaches influence consumers' protection motivation differently.

(6) Investigate whether gender and different types of perceived risk influence consumers' protection motivation differently.

(7) Investigate whether gender and different fear appeal approaches and different types of perceived risk influence consumers' protection motivation differently.

The secondary objectives investigated how the main variable(s), as identified in objectives 1 - 7 (i.e. different fear appeal approaches, different types of perceived risk and gender), influence each of the following components differently: perceived vulnerability to a threat; perceived severity of a threat; perceived fear; perceived response efficacy; perceived self-efficacy and behavioural intent. For a more detailed representation of the primary and secondary research objectives, please refer to Appendix A.

Taking into account the aforementioned research objectives, the following overarching hypotheses were formulated. These hypotheses directly correspond with the primary objectives:

H_0^1: There is no difference between the influence of question-based warnings and statement-based warnings on the components of the PMT.

H_0^2: There is no difference between the influence of physical risks and social risks on the components of the PMT.

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H_0^3: There is no difference between the influence of question-based warnings and statement-based warnings as well as physical risks and social risks on the components of the PMT.

H_0^4: There is no difference between the influence of males and females on the components of the PMT.

H_0^5: There is no difference between the influence of males and females as well as question-based warnings and statement-based warnings on the components of the PMT.

H_0^6: There is no difference between the influence of males and females as well as physical risks and social risks on the components of the PMT.

H_0^7: There is no difference between the influence of males and females as well as physical risks and social risks as well as question-based warnings and statement-based warnings on the components of the PMT.

By means of addressing each of the aforementioned hypotheses, the research objectives of this study were realised.

5.2 RESEARCH DESIGN

This study was conducted in two consecutive phases. Firstly, secondary research was conducted to gain a deeper understanding of different fear appeals and perceived risk. Thereafter, primary research was conducted to address this study's objectives.

5.2.1 Secondary Research

Secondary research makes use of existing information that was collected for some purpose other than the current study (Malhotra, 2004:102; Zikmund and Babin, 2010:163). This study used libraries as well as online research databases to find articles, books and other publications that were relevant to the present topics. Specifically, an extensive literature review was conducted on marketing management, with emphasis being placed on social marketing, fear appeals and different fear appeal models, as well as the negative effects of using fear appeals and potential strategies that can be implemented to overcome these negative effects.

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However, secondary data is associated with some disadvantages, such as a lack of relevance and accuracy (Malhotra, 2004:103; Iacobucci and Churchill, 2010:144). Consequently, the current study did not rely solely on the use of secondary research to realise its research objectives, but also utilised primary research.

5.2.2 Primary Research

According to Kotler and Keller (2012:122), primary research is a process which consists of collecting new data for a specific purpose. In other words, primary research originates from a researcher in order to address a problem, as specified by the researcher (Malhotra, 2004:136). There are two types of primary research: qualitative and quantitative research; this study employed both methods.

(a) Qualitative Research Design

The qualitative data obtained for this study, were collected by means of two focus groups. These focus groups consisted of eight respondents each, all of whom were selected in the same manner as per the quantitative research, as will be discussed in section 5.2.2(b). Importantly, all of the respondents adhered to the target population's qualifying dimensions, namely that they should be older than 18 years of age, possess a valid driver's licence and have consumed alcohol in the month before sampling. Moreover, each focus group was dedicated to a specific gender group. Gender was used as a means for respondent division due to findings suggesting that males and females exhibit different driving behaviours and respond differently to different types of risk (Byrnes, Miller and Schafer, 1999:378; Constantinou *et al*., 2011:1329).

Both focus group sessions were allotted a two-hour time slot, with all relevant discussions being recorded via an audio recording device. The discussion guide that was used during both focus groups can be seen in Appendix B and helped to ensure that all important discussion points had been addressed.

The focus groups were conducted to serve two purposes. The main purpose was to explore the respondents' thoughts about fear appeals and their opinions regarding drinking-and-driving. To achieve this goal, questions such as "Which type of fear appeal did you respond better to? The questions or the statements?", "Why?" and "Have you ever consumed alcohol and then driven on the same night?" were asked.

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The ancillary purpose of the focus groups was to select the stimuli that were used for the experiment and to establish whether the respondents shared the researcher's view of which fear appeals were classified as physical risks and social risks.

To achieve this secondary objective, respondents were given a measurement instrument and asked to rate 24 different warnings pertaining to drinking-and-driving. These warnings were self-created according to existing warnings (Shelton, 2011; Usborne, 2014) and then tested by means of focus group discussions to ensure face and content validity. Half of these warnings were in question format, while the other half was formed as a statement. Furthermore, of the 12 question- and 12 statement-based warnings, half described what the researcher proposed might be the physical risks associated with drinking-and-driving, while the other half was dedicated to portraying the proposed social risks connected to this deviant behaviour.

Both the qualitative measurement instrument, as well as the comprehensive list of warnings, can be seen in Appendix C and D respectively. Respondents were required to first classify the warning as either a social risk, physical risk or both. In the case of them selecting the "both" option, by means of ticking the social risk and physical risk boxes, an additional explanation for their choice was required. Thereafter, the respondents were requested to rate each warning, on a scale of 1 - 10, based on how fearful it made them, with 1 meaning "Not at all fearful" and 10 meaning "Very fearful". After completing this exercise, the different types of risks that the warnings represented were discussed. This discussion helped to determine that the respondents' understandings of a physical and social risk were synonymous with that of the study's definitions.

Each discussion, as recorded by the audio recording device, was then transcribed in a Word document. This verbatim transcription of both focus groups served as a tangible point of reference when interpreting the results of this study's experiment and is available upon request.

In summary, these focus groups proved invaluable to this study's research efforts. Not only did these focus groups allow for increased insight into consumers' thinking about drinking-and-driving, they further provided insight as to the potential success of different fear appeal approaches, according to the respondents involved. Additionally, the focus groups confirmed the classification of the 24 warnings as either a physical

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or social risk thereby helping to select the four experimental stimuli that were used in the quantitative research design.

(b) Quantitative Research Design

The quantitative research method that was selected for the present study, was that of an experiment. More specifically, the experiment used a post-test-only group design, with four experimental groups and followed a between-subjects experimental design. Essentially, the experiment consisted of four experimental groups, with each group being assigned to a stimulus at random, thereby limiting each experimental groups' stimulus exposure to a particular stimulus. In other words, each experimental group was exposed to only one manipulation. Moreover, a between-subjects design was selected for this study because this type of experimental design is largely associated with increased validity (Zikmund *et al*., 2013:270).

One way in which the study did strive to increase validity was by controlling potential extraneous variables through randomisation. Randomisation can be defined as the random assignment of treatment conditions to experimental groups (Malhotra, 2004:212). By means of randomly assigning a stimulus to an experimental group, extraneous variables can be represented equally across the experiment, thereby ensuring that their effects are more controlled (Zikmund *et al*., 2013:261). This study made use of randomisation by means of randomly assigning respondents to one of four treatment conditions. Upon assignment to a specific condition, respondents were each sent an email with a link to this study's online questionnaire.

The questions contained in the questionnaire formed two separate sections. The first section dealt with general behavioural questions pertaining to respondents' engagement in drinking-and-driving, while the second section addressed their perceptions of the PMT components, namely the severity of, their vulnerability to, their response efficacy, their self-efficacy and their behavioural intentions relating to drinking-and-driving. It was in between this first and second section that respondents were exposed to the experimental manipulation. Respondents were advised to consider the warning carefully as it would be used as a point of reference for the questions to follow.

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After completing the second section of the questionnaire, the respondents were thanked for their time and their responses were saved to the electronic database on which the questionnaire was created.

(c) Experimental Validity

An important consideration when designing any experiment is validity. Validity is defined as the accuracy of a measure and the extent to which an experiment is valid, determines the quality of the study (Zikmund *et al*., 2013:658).

In an experimental study context, there are two types of validity, namely internal validity and external validity. The former is concerned with the extent to which an experimental variable is truly responsible for any variance in the dependent variable (Iacobucci and Churchill, 2010:107; Zikmund *et al*., 2013:652). Contrastingly, external validity pertains to the accuracy with which experimental results can be generalised beyond the experiment (Iacobucci and Churchill, 2010:107; Zikmund *et al*., 2013:650).

(i) Internal Validity

High internal validity is most often associated with laboratory studies (Zikmund *et al*., 2013:271). The reasoning behind this association is that within a laboratorial experiment, a researcher has increased control over the potential impact of extraneous variables due to the artificially constructed environment which they created.

Given that the current study is a field experiment and made use of a more natural environment, the internal validity of the experiment was difficult to ensure. However, certain steps were taken to ensure control regarding extraneous variables. Firstly, as previously mentioned, randomisation of treatment conditions was used. Secondly, specific prompts in the measurement instrument were designed to grab respondents' attention at important points during the questionnaire, thereby helping to concentrate respondents' attention and hopefully negate the effects of potential external forces.

(ii) External Validity

External validity signifies that the results of a study are generalisable to the larger target population. That is, external validity is enhanced when field experiments are

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used, when respondents from a sample truly reflect the target population and when experimental results extend to other market segments (Zikmund *et al*., 2013:273).

An important consideration regarding external validity is the use of student respondents. There is concern that despite students being easily accessible, they might be atypical and unrepresentative of the intended target population (Zikmund *et al*., 2013:274). In the current study, the target population consisted of individuals aged 18-28 years. With the average age of a South African university population being between 18 and 25 years (Universum, 2014), students represent a large proportion of this study's intended target population. Consequently, students were regarded as a reasonably representative sample, whose inclusion only further contributed to the increased external validity for this study.

In summary, both types of validity are important. However, often there is a trade-off between the two. Given that the current study was a field experiment, it demonstrates high external validity, while making experimental provision for increased internal validity. A significant contributor to the validity of the study was as a result of the measurement instrument that was used.

5.3 MEASUREMENT INSTRUMENT

The measurement instrument that was used for this study can be seen in Appendix F. Moreover, the measurement instrument was an online questionnaire that was designed via a Stellenbosch University electronic platform, known as SUrveys. In designing the questionnaire, a number of considerations had to be taken into account such as the layout and type of scale to use, how many response categories to include, how questions should be phrased and whether to use reversed-polarity or not.

5.3.1 The Selected Scale Items

The items that were selected for this study's measurement instrument were all pre-designed and pre-tested in previous studies that pertained to fear appeals. Moreover, these studies had been conducted across a range of different domains such as cigarette smoking, HIV campaigns, anti-obesity campaigns as well as the domain of safer sex practices (Maddux and Rogers, 1983:473; Witte, 1992:332; Greening and Stoppelbein, 2000:96; Renner and Schwarzer, 2003:187; Lewis *et al*., 2008:407).

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It was on the basis of these pre-designed and pre-tested items that this study's measurement instrument was created, with the items from the previous studies merely being adapted to comply with the context of drinking-and-driving. The items that were adapted for this study's purpose can be seen in Table 5.1.

Table 5.1: List of Adapted Sample Items

Dimension	Original Item	Source	Item Section in Questionnaire
Recent Drinking-and-driving Behaviour	When was the last social event you attended?; How much alcohol did you consume at this event?; How did you get home from the event?	Greening and Stoppelbein (2000:96)	Section C
Past Drinking-and-driving Behaviour	I have driven in the past year while intoxicated; I have been cited for drunk driving in the past 5 years; I have been arrested for drunk driving in the past 5 years	Greening and Stoppelbein (2000:96)	Section D
	I have driven when over the legal limit in the past 12 months	Lewis *et al*. (2008:407)	
Vulnerability	If I continue smoking, it is likely that I will develop lung cancer or heart disease in the years ahead	Maddux and Rogers (1983:473)	Section E
	I am at risk of getting kidney disease	Maguire *et al*. (2010:350)	
	I am at risk for meningitis; It is possible that I will get meningitis; I am susceptible to meningitis	Gore and Bracken (2005:33)	
Severity	To suffer irreversible blindness is an extremely severe threat; To suffer isolation, rejection and exclusion from society is an extremely severe threat	Arthur and Quester (2004:685)	Section E
	Lung cancer and heart disease remain as serious and dangerous as they were several years ago	Maddux and Rogers (1983:473)	
	I believe that experiencing mental or emotional problems can lead to serious negative consequences; I believe that experiencing mental or emotional problems can be extremely harmful	McKinley and Ruppel (2014:104)	
	Drinking-and-driving can lead to very serious consequences	Cismaru and Lavack (2006:13)	
	Kidney disease is a severe threat	Maguire *et al*. (2010:350)	
	Meningitis is a serious threat; Meningitis is harmful; Meningitis is a severe threat	Gore and Bracken (2005:33)	

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Dimension	Original Item	Source	Item Section in Questionnaire
Response Efficacy	Calling a cab for a ride after I have been drinking prevents getting a ticket or being in an automobile accident	Greening and Stoppelbein (2000:97)	Section E
	Early testing is effective in preventing kidney damage	Maguire *et al*. (2010:350)	
	Getting vaccinated prevents meningitis; Getting vaccinated works in deterring meningitis; Getting vaccinated is effective in removing the threat of meningitis	Gore and Bracken (2005:33)	
	I believe condoms prevent HIV contraction; Condoms are effective protectors against AIDS	Witte (1992:332, 335)	
	By following the recommendations, I will be able to avoid the flu/avoid causing a car accident	Cismaru and Lavack (2006:13)	
	For a smoker, giving up cigarettes is extremely effective in reducing the chances of developing lung cancer	Rogers and Mewborn (1976:57)	
Self-efficacy	I am unable to abstain from driving after I have been drinking	Greening and Stoppelbein (2000:97)	Section E
	I am able to get tested to prevent kidney damage	Maguire *et al*. (2010:350)	
	I think that I can easily use condoms to prevent HIV contraction; I'm able to use condoms to effectively prevent AIDS	Witte (1992:332, 335)	
	I am able to get a vaccination to prevent against meningitis	Gore and Bracken (2005:33)	
	I feel very confident in my ability to quit smoking	Manyiwa and Brennan (2012:1427)	
	I can manage to stick to healthful food	Renner and Schwarzer (2003:187)	
Behavioural Intent	I intend to live a healthier life	Renner and Schwarzer (2003:187)	Section G
	At the present time, I intend to stop smoking completely; I intend to cut down on the number of cigarettes that I smoke; Within a week or two, I will give up smoking for a day	Maddux and Rogers (1983:473)	
	Within the next two weeks, I intend to adopt monthly breast self-examination as a regular habit	Rippetoe and Rogers (1987:599)	
	The previous advertisement has deterred me from smoking; The previous advertisement has caused me to reconsider my smoking habit	Van Huyssteen (2010:123)	

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Dimension	Original Item	Source	Item Section in Questionnaire
Fear	Fearful; Tense; Nervous; Anxious; Uncomfortable; Scared	Arthur and Quester (2004:684)	Section F
	Fearful; Worried; Anxious; Threatened; Scared	Laroche *et al*. (2001:304)	
Risk Propensity	Safety first; I do not take risks with my health; I prefer to avoid risks; I take risks regularly; I really dislike not knowing what is going to happen; I usually view risks as a challenge	Meertens and Lion (2008:1520)	Section H

5.3.2 Structuring the Measurement Instrument

A questionnaire typically consists of two types of information: the basic information which the respondents provide, such as their attitudes and opinions, and classificatory information, or their personal information (Iacobucci and Churchill, 2010:221). Some authors suggest that when structuring a measurement instrument, it is important to situate the basic information first, before asking more personal questions that might offend and influence respondents' answers later (Iacobucci and Churchill, 2010:221; Zikmund and Babin, 2010:380).

Literature suggests that one should also use the funnel technique when designing a questionnaire, to ensure that responses are not biased (Zikmund and Babin, 2010:380). The funnel technique refers to the structuring of a questionnaire in such a way, so as to ask general questions before asking more specific questions (Malhotra, 2004:298).

When designing the current study's measurement instrument the funnel technique was used. To avoid order bias, which is the bias caused by the influence of earlier questions in a questionnaire, the classificatory information was asked first, followed by the basic information (Zikmund and Babin, 2010:380).

Should respondents have been required to first answer the questions pertaining to the PMT components (i.e. the basic information), these questions may have primed respondents, potentially causing them to answer the classificatory questions in an untruthful manner. In other words, respondents may have answered the questions relating to their past and recent drinking-and-driving behaviour, as well as their income and what percentage of their income is spent on alcohol, in a manner that is

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congruent with their answers for the basic information (i.e. recognising the severity of drinking-and-driving and the fact that this behaviour can result in serious negative consequences).

Importantly, the funnel technique was also used to order the classificatory information into three sections, with each subsequent section becoming more personal and focused. For instance, the easy, more general classificatory questions were asked first, such as the respondent's age, gender, race and disposable income. The qualifying questions, or the questions which filter out respondents based on their compliance with the target population's qualifying dimensions, were also included in this first classificatory section. The second classificatory section asked respondents to provide information about their recent drinking-and-driving behaviour, followed by the final classificatory section which dealt with respondents' past drinking-and-driving behaviour.

5.3.3 Designing the Measurement Instrument

This study's measurement instrument, designed using the items in Table 5.1, consisted of 13 pages with a status bar to show the respondent how many pages they had completed. Each page was dedicated to a specific section of the questionnaire, or to delivering some information to the respondent.

Page one focused on a general introduction to the study, informing the respondent of their rights as a research participant and requiring them to indicate if they would like to participate in the study. Respondents could choose between two radio buttons, with one option being a 'yes' and the other being a 'no'. If 'yes' was selected, the respondent was directed to page two and would continue on with questionnaire. If, however, option 'no' was selected, the respondent was directed to the end of the questionnaire, thanking them for their time.

Page two provided important information to respondents about alcohol consumption and South Africa's legal blood alcohol content. Examples of different types of alcohols and how much would need to be consumed to be over the legal limit, were highlighted. Pages three and four dealt with the first section of the classificatory questions. Pages five and six were dedicated to sections two and three of the classificatory information, asking respondents about their recent and past drinking-and-driving behaviours.

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Pages seven and eight concentrated the respondents' attention on the warning label that was displayed, urging them to keep the warning in mind when answering the questions to follow. Pages nine, ten and eleven focused on the questions pertaining to the PMT components (i.e. vulnerability, severity, response efficacy, self-efficacy, fear and behavioural intent), while page twelve measured respondents' propensity for risk according to Meertens and Lion's (2008:1520) risk-propensity scale.

5.3.4 The Type of Scale

The classificatory information (i.e. personal information) was collected mostly by means of a nominal scale, with a few classificatory questions making use of an ordinal as well as a ratio scale. The information pertaining to the PMT components (i.e. basic information), however, was obtained solely by means of an interval scale. More specifically, the basic information was attained by way of a Likert scale.

5.3.5 The Optimal Number of Response Categories

There has been much disagreement regarding a scale's optimal number of response categories. Garner (1960:352) conducted a study in which 20 response categories were provided. Based on his findings he proposed that the larger the number of response alternatives, the more information is transmitted. Contrastingly, other researchers suggest that smaller response categories – up to two or three categories – would be appropriate under certain circumstances (Lunney, 1970:268; Jacoby and Matell, 1971:498).

A study conducted by Preston and Colman (2000:1) concluded that scales with five, six or seven response categories were statistically more reliable and valid than those with fewer response categories. Furthermore, a five-point response category was perceived as being easier to complete, subsequently increasing respondents' willingness to complete the measurement instrument (Preston and Colman, 2000:11). In considering the aforementioned reasoning, a five-point Likert scale, anchored by *strongly disagree* and *strongly agree*, was selected for this study.

5.3.6 Phrasing the Questions

When phrasing a questionnaire item, there are a number of considerations that need to be taken into account. This study followed the recommendations of Iacobucci and Churchill (2010:218-221) as well as Zikmund *et al*. (2013:341-5) when designing the

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measurement instrument for the current study. Accordingly, the questionnaire items used simple, unambiguous language while avoiding leading and loaded questions. Furthermore, the use of dogmatic language was avoided.

5.3.7 The Trade-Off: Reversed-Polarity Items versus Scale Unidimensionality

Acquiescence bias is the tendency for respondents to agree with most, if not all, questions in a measurement instrument (Zikmund *et al*., 2013:646). In order to counter the effects of this bias, measurement scale items are often reversely polarised, forcing respondents to pay increased attention to the questions being asked (Hersche and Engelland, 1996:366; Sliter and Zickar, 2014:215).

However, findings have indicated that items that are negatively worded can undermine a scale's unidimensionality, or the condition in which a set of indicators share only a single underlying factor, as well as a scale's overall reliability (Hersche and Engelland, 1996:366; Roszkowski and Soven, 2010:117). Hersche and Engelland (1996:372) argue that in order for research results to be interpreted, the validity of the measurement instrument used, needs to be demonstrated. Consequently, negatively phrased items were not used in the final questionnaire in order to preserve both the reliability and validity of this study's measurement instrument, and by extension, the study itself.

5.3.8 Reliability of the Measurement Instrument

Reliability is an indicator of a measure's internal consistency (Zikmund and Babin, 2010:334). According to Furlong, Lovelace and Lovelace (2000:66), if a measure consistently assigns the same score to individuals or objects with equal values, the instrument can be considered reliable. For a researcher, ensuring the reliability of a measurement instrument is of great importance (Furlong *et al*., 2000:66). Should an instrument be deemed unreliable, the relationship or difference between the variables in question may not be valid.

In this study, Cronbach's coefficient alpha was used to assess internal consistency and is the method that is most commonly used (Zikmund *et al*., 2013:302). This procedure compares respondents' responses on each item with their responses on the other items from the same scale (Furlong *et al*., 2000:68). The coefficient demonstrates whether the items converge or not. Should the items be homogenous

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and measure a single attribute, the measure for inter-item consistency will be high (Furlong *et al*., 2000:68; Zikmund and Babin, 2010:334).

Coefficient alpha scores range from 0 to 1, with 0 meaning no consistency and 1 meaning complete consistency. According to Zikmund *et al*. (2013:302), scales with coefficient alphas between 0.8 and 0.95 are considered to have very good reliability. Subsequently, scales with a coefficient alpha between 0.7 and 0.8 have good reliability, while a coefficient alpha between 0.6 and 0.7 indicates fair reliability (Hair, Anderson, Tatham and Black, 1998:88,118; Hume, Ball and Salmon, 2006). A coefficient alpha score below 0.6 implies that a scale has poor reliability.

However, solely assessing reliability is not sufficient. A good measurement instrument should be both reliable and valid (Furlong *et al*., 2000:69).

5.3.9 Validity of the Measurement Instrument

Validity is concerned with the accuracy of a measure (Zikmund *et al*., 2013:303). In other words, if a scale measures what it is supposed to measure, it is considered to be valid. There are different forms of validity, namely construct validity, face validity, content validity, criterion validity, convergent validity and discriminant validity.

(a) Face Validity

Face validity is determined by viewing a measurement instrument and judging the extent to which the content logically appears to reflect the variable(s) that are being measured (Furlong *et al*., 2000:71; Zikmund *et al*., 2013:303). This study ensured the face validity of the measurement instrument by means of two experts in the marketing field systematically reviewing the content of each item in relation to its overarching construct.

(b) Content Validity

The degree to which the items of a measurement instrument, cover the domain of the concept that is being measured, reflects the degree of content validity that a measurement instrument possesses (Zikmund *et al*., 2013:304). The content validity of this study was assessed in the same way as the face validity: by means of experts judging the representativeness of the measurement instrument content.

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(c) Convergent and Discriminant Validity

Scales that are highly reliable (i.e. concepts that should be related to one another are indeed related) contain convergent validity, while discriminant validity represents how distinct a measure is (Zikmund *et al*., 2013:305). By means of using pre-designed and pre-tested items, whose convergent validity and discriminant validity had already been realised, this study was able to ensure the convergent and discriminant validity of the measurement instrument.

(d) Construct Validity

Construct validity exists when a measurement instrument consistently measures and accurately represents a unique concept (Zikmund *et al*., 2013:304). By ensuring the face, content, discriminant and divergent validity of the measurement instrument, the construct validity of this study was realised.

5.3.10 A Pilot Study for the Measurement Instrument

Upon the validity of the measurement instrument being realised, a pilot study was conducted to ensure that the meaning of each item remained intact after having been adapted from the items in Table 5.1. Moreover, conducting a pilot study allowed for the discovery of any unconsidered factors that may have affected the target population's answers when the questionnaire was distributed to the selected sample.

Sample units for the pilot study were selected by means of a list of acquaintances that the researcher had compiled. In total, 25 respondents were contacted and asked to fill out the questionnaire, via a link that directed them to the online measurement instrument. After two days, 23 respondents had completed the questionnaire. Those responses were then coded and analysed by means of a Factor Analysis, the results of which led to a few minor changes in the measurement instrument prior to the full-scale distribution to the sample. These changes included adapting the questionnaire items to be less assuming of respondents' drinking-and-driving behaviours. For instance, instead of including "I am at risk because I drink and drive" as a questionnaire item, the following questionnaire item was include, "I am at risk if I drive when over the alcohol limit".

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5.4 SAMPLING PROCESS

Once the measurement instrument was designed and ready for distribution, considerations regarding the sampling process needed to be addressed. These considerations included defining the target population, designing the sampling method that was used as well as executing the sampling unit selection plan.

5.4.1 Target Population

Given that drinking-and-driving had been selected as the background for this study, there were three qualifying dimensions that respondents had to adhere to. Firstly, respondents had to be of legal drinking as well as driving age (i.e. at least 18 years old), have consumed alcohol in the month prior to sampling and possess the means to drive (i.e. a valid driver's licence). Based on these considerations, generation Y individuals, born between 1977 and 2000, were chosen for this study's target population. Moreover, research indicated that individuals aged between 15-39 years (i.e. generation Y) are most at risk in terms of drinking-and-driving, further making them apt respondents for this study (Chokotho, Matzopoulos and Myers, 2012; Sukhai and Seedat, 2013; Peters, 2015b).

However, despite the fact that generation Y consumers range between the ages of 15 and 38 years, the maximum age limit of 28 years was selected for two reasons. Firstly, selecting respondents with a smaller age difference helped to ensure that the respondents were more like-minded. Secondly, research has identified that while younger drivers are most at risk in terms of road fatalities (Hatfield and Fernandes, 2009:25), individuals aged between 18 and 28 years are most likely to engage in risky driving behaviour (Cauberghe *et al*., 2009:277).

5.4.2 Sampling Method

Non-probability sampling methods were used, as a sampling frame for this study's intended target population was not available. More specifically, this study made use of convenience sampling for two primary reasons. In the first instance, the use of a convenient location meant that the financial and time constraints of this study could be alleviated. Secondly, individuals who adhered to the target population's three qualifying dimensions regarding age, alcohol consumption and driving behaviour, were conveniently available.

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The Stellenbosch area was identified as a location of convenience. One institution in Stellenbosch, which consisted of a large proportion of this study's intended target population, was the University of Stellenbosch. Consequently, Stellenbosch University students were identified as respondents of convenience. Despite most respondents being students, and these students being conveniently available, their inclusion in the study was based on their adherence to the three qualifying dimensions of the target population. In other words, the Stellenbosch students are generation Y individuals between the ages of 18 and 28 years, who consume alcohol and are in possession of a valid driver's licence.

5.4.3 Sample Unit Selection and Fieldwork

A sampling unit is the most basic element that is available for selection at some stage during the sampling process (Zikmund and Babin, 2010:419). With the Stellenbosch area, and specifically the University being identified as a location of convenience, Stellenbosch students were identified as potential sampling units. Moreover, sample unit selection and fieldwork occurred simultaneously.

It is important to note that the previous history of respondents was controlled for in both the qualitative and quantitative research. More specifically, before being included as part of this study's sample respondents were asked two qualifying questions, namely "Have you been involved in a road accident due to drinking-and-driving?" and "Do you know of someone who has been involved in a road accident due to drinking-and-driving?". After completing these questions, respondents were then given the option to either continue participating in the study or to withdraw their participation.

The measurement instrument that was used for this study was that of an online questionnaire, which was created and distributed by means of SUrveys, using a University-provided distribution list of potential respondents. Given that this study's definition of a sampling frame included a complete list of the target population, the university-provided distribution list, which was limited solely to Stellenbosch, was not considered to be a sampling frame, but merely a list of individuals who conveniently fit the identified target population.

Within the SUrveys platform, the four questionnaires, which differed only in the warning they displayed, were randomly assigned to a group of respondents from the

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aforementioned distribution list. Once the respondents had been randomly divided into their respective groups, the fieldwork took place by means of creating an email invitation on SUrveys, inviting the respondents to take part in the study. Due to the electronic nature of the questionnaire, sample unit selection was streamlined by means of excluding individuals who did not form part of the target population. This exclusion of individuals was made possible by the use of two consent-seeking questions, namely, “Would you like to participate in this study?” and, after providing some very personal information, “Do you still wish to continue with this questionnaire?”, as well as two screening questions, namely, “Do you have a valid driver’s licence?” and “Have you consumed alcohol in the last month?”.

Out of the total number of responses, there were 292 valid responses in group one, 299 valid responses in group two, 268 valid responses in group three and 344 valid responses in group four, resulting in a total sample size of 1203 responses. Once these valid responses had been obtained, data analysis commenced.

5.5 DATA ANALYSIS

Once the data collection was completed, the raw data was saved to an excel file where it was coded. The statistical program, Statistica, was used to conduct the subsequent statistical analyses. Two distinct types of analyses were conducted: descriptive analyses and inferential analyses.

5.5.1 Descriptive Analysis

The descriptive data included the respondents’ gender, age, recent drinking-and-driving behaviour as well as past drinking-and-driving behaviour.

5.5.2 Inferential Analysis

Before the inferential analyses commenced, a Cronbach Alpha test was conducted to determine the reliability of the measurement instrument. Upon confirmation of the measurement instrument’s reliability, inferential analysis by means of hypothesis testing, commenced.

More specifically, a three-way analysis of variance (ANOVA) was conducted in order to determine whether the influence of different fear appeal approaches, perceived risks and gender on generation Y consumers’ protection motivation was significantly

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different amongst the four experimental groups. The results in this regard determined whether the research hypotheses, as identified in section 5.1.2, were rejected or not.

5.6 SYNOPSIS

This chapter has provided a meticulous discussion of the methodology that this study followed. Based on this detailed methodological review, a concise understanding of the research design has been achieved, with particular emphasis being placed on the construction of the measurement instrument as well as the sampling processes that were undertaken. The data analysis techniques that this study applied, were also briefly discussed.

The following chapter, the results chapter, serves as an elaboration of the processes detailed in this chapter. Specifically, Chapter 6 will detail the results of this study in terms of both the qualitative and quantitative research methods implemented, ultimately achieving this study's research objective.

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CHAPTER 6

DATA ANALYSIS AND RESULTS

6.1 INTRODUCTION

Given the two-part nature of the present study, this chapter will report the empirical findings. In the first instance, the qualitative findings will be discussed. Emphasis will be placed on the insights that each focus group generated with regards to three main themes: drinking-and-driving behaviour, the use of different types of risk and different fear appeal approaches by marketing practitioners.

The second section of this chapter will address the quantitative findings. Specifically, the profile of the sample will be described, followed by a discussion of the reliability of the measurement instrument. This chapter will conclude by addressing each of the seven research hypotheses and, in doing so, discuss the influence that different fear appeal approaches and different types of perceived risk have on generation Y consumers' protection motivation behaviour.

6.2 QUALITATIVE FINDINGS

To fully understand and investigate whether different fear appeal approaches and perceived risks would influence consumers' protection motivation differentially, both quantitative and qualitative research methods were used. Specifically, the qualitative research method consisted of two focus groups.

6.2.1 Focus Group Insights

Despite the focus groups being separated by gender, each focus group began with general questions about respondents' drinking behaviour. Such questions included "Why do you drink alcohol?", "How often do you drink alcohol?" and "On what occasions do you drink more alcohol?". These questions allowed respondents to become comfortable with the focus group process, as well as with one another, by easing respondents into a conversation. These opening questions also established the foundation on which the subsequent discussions were built. Thereafter, respondents were asked more direct questions pertaining to their drinking-and-driving behaviour, their opinions on different types of fear appeal approaches as well

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as different types of risk. Appendix B provides the focus group discussion guide that was used.

(a) Drinking-and-driving Behaviour

To gain insight into respondents' drinking-and-driving behaviour, questions such as "At any point in time, have you consumed alcohol and then driven a vehicle?", "What determines whether you drink and then drive?" and "How did you feel in that situation?" were asked. This discussion resulted in interesting findings regarding the topic, as well as the different genders' opinions thereof.

In terms of drinking-and-driving, all male respondents and seven of the eight female respondents, admitted to having consumed alcohol and then driven a vehicle at some point in their life. More specifically, all respondents, except for three females, admitted to having drunk and then drove in the last three months. Importantly, the males were of the opinion that "everyone has [drunk and drove before]", indicating that it is a norm within their social groups. This notion that drinking-and-driving amongst friends is an accepted norm, was also echoed by three female respondents. However, one female respondent was upset at the idea that drinking-and-driving would be considered a social norm. She alluded to the fact that people tend to think "[I've] been doing it for so long… and nothing's happened thus far, so it's ok". This was an important statement, as it captured the attitude of some of the respondents who admitted to drinking-and-driving on a regular basis.

Upon further questioning as to "what determines whether you drink-or-drive?", the males indicated that whether "you're [the] designated driver or not" helps to determine how much alcohol you can consume before driving. A further determination was "how close you are to the venue", insinuating that the closer an individual is to a venue, the more they are likely to drink. Other reasons included "wanting to get out of a specific situation", as well as the lack of a safe and affordable means of public transport.

Importantly, all respondents indicated that there are consequences to drinking-and-driving. When posed the question, "what would you say some of the consequences of drinking-and-driving are?", "jail" and "prison time" were amongst the first answers across both focus groups. This response was also the most frequent. For the male respondents, jail represented the threat of physical harm from other inmates,

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whereas for the female respondents, jail represented the loss of their careers as well as “death”, as one respondent rhetorically asked, “how many of us would survive in jail?”. In essence, jail as a consequence of drinking and driving, although classified by respondents as a social risk, was also linked to the threat of physical harm. Other consequences that were mentioned included “injuring yourself and others” as well as “dying”.

An interesting finding was that both groups of respondents were not sure how much alcohol they could consume before exceeding the legal driving limit in South Africa. In terms of the males, some of them believed that their alcohol tolerance was higher than most, especially when they took special precautions such as drinking water intermittently and eating carbohydrates, which in their opinion, allowed them to drink more before driving.

In summary, this discussion helped to provide a better understanding as to the drinking-and-driving behaviour amongst generation Y individuals in South Africa. Importantly, generation Y individuals are aware that there are consequences to this negative behaviour, and they do in fact fear these consequences. However, due to the relative acceptability of this behaviour as a social norm, and the lack of safe and affordable public transport, generation Y individuals seem to continue to engage in this deviant behaviour, expressing no intent to cease.

(b) Utilising Different Types of Risk

After respondents had answered the questions pertaining to their drinking-and-driving behaviour, they were asked to complete a questionnaire, ranking each of the 24 warnings they were presented with. These warnings consisted of 12 statement-based warnings and 12 question-based warnings, with each group being further divided into 6 proposed physical risks and 6 proposed social risks, as determined by the researcher. The comprehensive list of the focus group warnings, as well as the qualitative rating scale, can be seen in Appendix D and C, respectively.

After having classified each warning as either a physical or a social risk, and rating the level of fear it evoked in them, respondents were asked what they thought about the different warnings. As expected, the respondents classified any injury to themselves or others as a physical risk, while social risks were associated with

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consequences that affected one's social standing, such as going to jail, losing their driver's licence as well as their jobs.

A consistent theme amongst the respondents was the concern for their friends, as "the [warnings] that had to do with friends were the most fearful". According to one respondent "if something happens to my friends, that would matter more to me than if something happened to myself". This sentiment was shared by most of the respondents, who agreed that "those were the [warnings] that stood out".

From these discussions, the manner in which respondents perceive different types of risks became clearer. Consistent with the characteristics of generation Y consumers, who are individualistic, yet group-oriented, respondents indicated that the physical risks had a greater impact on them. However, physical risks that also included harm to one's friends (and therefore threatened their association with a group), were also rated as having an important impact on them.

(c) Utilising Different Fear Appeal Approaches

The general consensus across both groups was that "the questions [wouldn't] have as much of an influence [as the statements]". Both male and female respondents were unanimous in agreeing that "the statements were bolder". Specifically, all the respondents indicated that they were much more likely to believe a statement as opposed to a question. In fact, the respondents agreed that the questions allowed for "too many [different] answers" and consequently, they did not engage with the question as it required too much effort. Time was also mentioned as a factor for respondents not wanting to engage with the questions.

Upon further questioning, the female respondents suggested two main alterations to the warnings that they were exposed to. In the first instance, language use was an important factor. Words that implied a consequence was guaranteed, such as drinking-and-driving 'will' kill you, were criticised for conveying a false sense of fear and immediately dismissed by the respondents as being untrue. In a similar vein, the word 'how' that was used in some of the question-based warnings, was labelled as weak and uninspiring. In the second instance, the female respondents suggested that the question-based warnings be improved by combining a fact with a question. The following example was given by one of the female respondents, "By drinking and driving you increase the possibility of killing someone by 68%. What are your

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chances?". These suggestions were noted by the researcher, and taken into consideration when selecting the final experimental stimuli, as well as the considerations for future research.

Considering the focus group discussions in terms of statement and question-based warnings, there was strong concurrence amongst the respondents that statement-based warnings would be more effective than question-based warnings.

6.2.2 Selecting the Experimental Stimuli

The qualitative rating instrument, as seen in Appendix C, was completed by each focus group respondent to determine which of the 24 warnings presented in the focus groups would be used as the experimental stimuli. Importantly, for a warning to be selected as an experimental stimulus, it had to comply with two specifications. Firstly, the warning had to be classified by the majority of the respondents as a specific risk (i.e. physical or social). Secondly, the warnings had to possess similar levels of fear to ensure that the comparison between experimental groups was robust. Based on the qualitative rating scale results, the selected level of fear, according to which the four stimuli were chosen, was moderate.

Table 6.1 illustrates the fear appeal warnings that were selected for each experimental group. The results pertaining to all the stimuli classifications can be seen in Appendix E.

Table 6.1: Focus Group Results of Experimental Stimuli

Group 1: Physical Statement **Drinking-and-driving leads to serious bodily harm**	Group 2: Physical Question **What are the consequences of drinking-and-driving on your physical health?**
Group 3: Social Statement **If you drink-and-drive, your friends will see you go to jail**	Group 4: Social Question **What will your friends think if you go to jail for drinking-and-driving?**

As can be seen in Table 6.1, four warnings were selected for the quantitative experiment: two statement-based warnings (one physical risk, one social risk) and two question-based warnings (one physical risk, one social risk).

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6.3 QUANTITATIVE FINDINGS

Upon completion of the qualitative research, the quantitative research could commence. By means of the four-group experiment, a total sample of 1203 respondents was yielded. For more detailed tables pertaining to the results presented here, please refer to Appendix G.

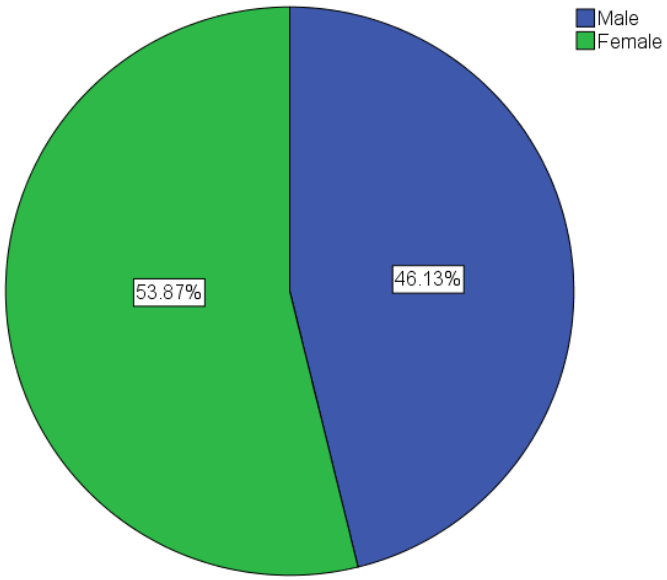
6.3.1 Demographic Profile of Sample

The demographics that were analysed for this study include the gender and age distribution, as well as the findings relating to respondents' recent and past drinking-and-driving behaviours.

(a) Gender

Out of the total sample (1203 respondents), 555 respondents were male (46.13%), while 658 respondents were female (53.87%). This gender distribution is displayed graphically in Figure 6.1.

Figure 6.1: Gender Distribution within Sample



Considering Figure 6.1 it is evident that the gender distribution within the sample was relatively equal. This equal distribution is not attributable to any specific factor, other than the random assignment of questionnaires and to respondents and their willingness to participate in the study. Moreover, considering the road statistics which indicate that there are more female than male drivers, this distribution can be considered as representative of the target population (Statistics South Africa, 2014).

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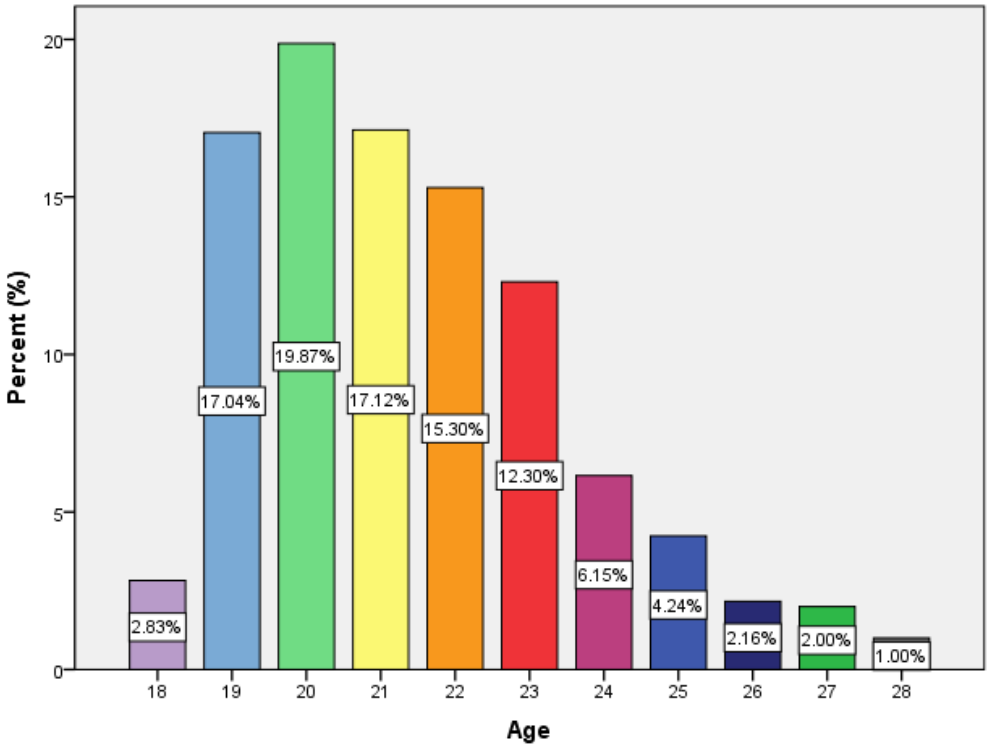
(b) Age

Respondents were aged between 18-28 years, although the majority of respondents (81.7%) were between the ages of 19-23 years. The mean age was 21.43, while the median was 21. Figure 6.2, indicates the distribution and respective percentages of age within the sample.

Figure 6.2: Age Distribution within Sample



As can be seen in Figure 6.2, the majority of respondents were between the ages of 19 and 21 years, comprising a total of 650 respondents (i.e. 54.03%) out of a possible 1203. The least frequent ages within the sample were respondents aged 18 years as well as those between 26-28 years of age. In summary, these age groups accounted for 96 respondents (i.e. 7.98%) of the total sample.

Given that data collection occurred by means of respondents who were conveniently available, the results displayed in Figure 6.2 were to be expected. Importantly, the age group of 18-28 years was selected for two reasons: this group is involved in the most road accidents, and these individuals share common traits (i.e. they are generation Y consumers). Keeping these criteria in mind, the discrepancy in age distribution was not problematic, and can be considered as representative of the target population.

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6.3.2 Profile of Sample's Recent and Past Drinking-and-driving Behaviour

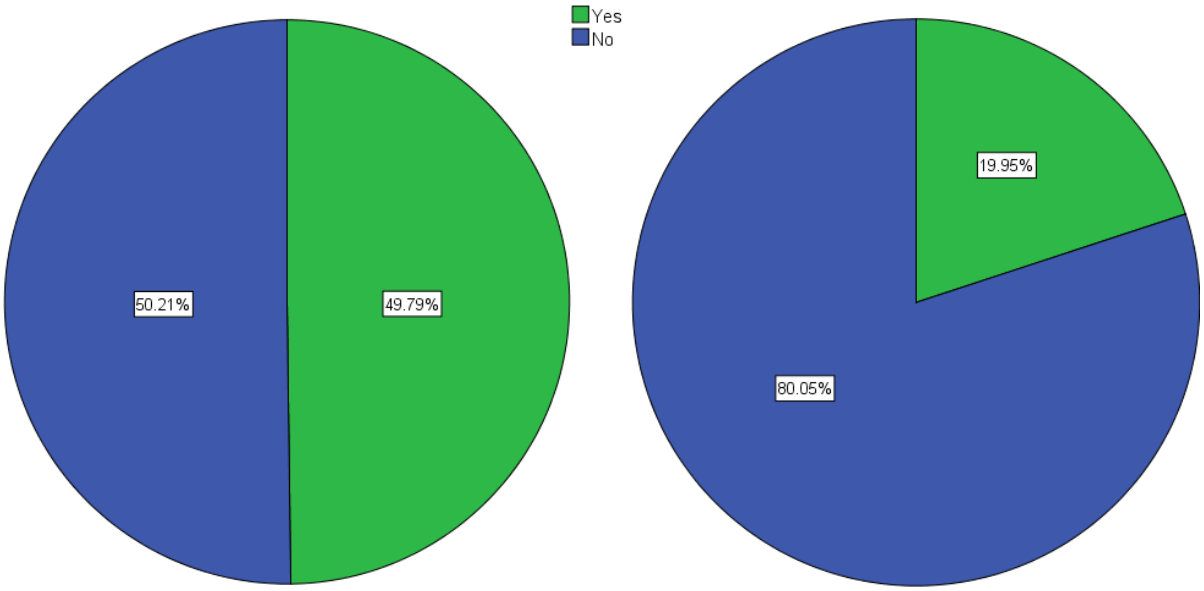
Research has found that previous driving behaviour serves as a significant predictor of future behaviour (Taubman-Ben-Ari, 2012:719; Nathanail and Adamos, 2013:109). In other words, past behaviour is a measure against which current behaviour and a respondent's behavioural intent can be compared.

In order to investigate respondents' previous and recent drinking-and-driving behaviours, the data collection instrument provided respondents with information about the legal blood alcohol limit in South Africa. More specifically, a list of popular drinks was also detailed, explaining how much of each drink an average individual could consume before being over the South African legal limit. Specifically, respondents were informed that consuming any one drink from the list provided, would make them ineligible to drive according to legislation.

(a) Past Deviant Behaviour

Figure 6.3a and 6.3b demonstrate respondents' drinking-and-driving behaviours within the last three months. Specifically, past drinking-and-driving behaviour includes those respondents who have driven while over the South African blood alcohol limit of 0.05g per 100ml, as well as those who have driven while intoxicated.

Figure 6.3a and 6.3b: Respondents' Past Drinking-and-driving Behaviour



(a) Driven while over Blood Alcohol Limit (b) Driven while intoxicated

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From Figure 6.3a, it is evident that nearly half of the sample had driven while over the legal blood alcohol limit in the past three months. In fact, 599 respondents (49.97%) had indicated 'Yes' in terms of this past drinking-and-driving behaviour, in comparison to 604 respondents (50.21%) who had indicated 'No'. This quantitative finding suggests that either respondents appear to not perceive a high level of risk when driving over the legal limit, or in spite of the perceived risk they continue to engage in this deviant behaviour.

Considering Figure 6.3b, only 240 respondents (19.95%) admitted to having driven while intoxicated within the past three months. As identified in the verbatim transcript of the focus groups, many respondents believe that their tolerance for alcohol is quite high. Therefore, despite being well above the legal driving limit, and therefore intoxicated, it appears as if respondents still seem to believe that they are capable of exhibiting safe driving behaviour.

This finding suggests the same two considerations as with the results that are demonstrated in Figure 6.3a, namely that respondents either perceive a low level of risk when driving while intoxicated, or alternatively that despite their increased perceptions of risk, they continue to drive while intoxicated.

(b) Recent Deviant Behaviour

In terms of recent drinking-and-driving behaviour, respondents were asked to specify when they last attended a social gathering. Thereafter, it was necessary to record how much alcohol they had consumed at this event as well as their method of transport home. Table 6.2 details these results.

Table 6.2: Volume of Alcohol Consumed and Method of Transport Home

			Method Transport Home from Event?				
			Taxi	I drove myself	Friend who had been drinking	Sober friend	I walked
Volume of Alcohol Consumed at Event (drinks)	0 - 1	Count	3	110	17	37	39
	2 - 3	Count	22	110	45	70	67
	4	Count	8	31	8	33	25
	5 - 6	Count	23	32	23	39	62
	7+	Count	32	26	29	24	71
Total		Count	88	309	122	203	264

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As can be seen, of the total sample (1108 respondents, as some did not indicate how much alcohol they had consumed), 309 respondents drove themselves home. Of these 309 respondents, 199 respondents had consumed two or more drinks, placing them over the legal driving limit. In a similar vein, 122 respondents drove home with a friend who had been drinking.

In other words, a total of 431 respondents (38.89%) put themselves and others at risk because of this deviant behaviour. Once more, the importance of finding an alternate approach to fear appeals, so that this deviant behaviour may cease, cannot be understated.

(c) Comparing Past and Recent Drinking-and-driving Behaviour

Seeing that past behaviour indicates the likelihood that an individual will re-engage in a certain behaviour, these two measures were compared against one another. Table 6.3a and 6.3b serve to illustrate these compared findings.

Table 6.3a and 6.3b: Comparing Past and Recent Deviant Behaviour

(a) Driving when over Blood Alcohol Limit

Driven over Blood Alcohol Limit				Method of Transport Home from Event				
				Taxi	I drove myself	Friend who had been drinking	Sober friend	I walked
Yes	Volume of Alcohol Consumed at Event (drinks)	0 - 1	Count	0	38	3	5	6
		2 - 3	Count	3	91	26	22	20
		4	Count	4	29	5	12	12
		5 - 6	Count	10	32	12	20	31
		7+	Count	27	26	21	15	36
	Total		Count	44	216	67	74	105

As highlighted by the blue column in Table 6.3a, 216 respondents who had previously driven a vehicle while over the blood alcohol limit, drove themselves home from the most recent social gathering they attended.

Moreover, at least 138 of these respondents re-engaged in the same drinking-and-driving behaviour, as they had consumed more than one drink before driving. In other words, no less than 138 respondents (23.04%), out of the original 599 respondents repeated their previous deviant behaviour.

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(b) Driving when Intoxicated

Driven while Intoxicated				Method of Transport Home from Event				
				Taxi	I drove myself	Friend who had been drinking	Sober friend	I walked
Yes	Volume of Alcohol Consumed at Event (drinks)	0 - 1	Count	0	14	1	0	0
		2 - 3	Count	1	27	10	2	8
		4	Count	2	14	3	5	1
		5 - 6	Count	4	19	7	1	9
		7+	Count	14	21	13	9	23
	Total		Count	21	95	34	17	41

Similarly, as illustrated in Table 6.3b by the blue column, 95 respondents (or 39.58%) who had previously indicated that they had driven while intoxicated, drove themselves home from the last social gathering they attended after having consumed alcohol.

According to the Institute of Alcohol Studies (2004), consuming four or more drinks impairs co-ordination and slows one's judgement. Taking this into consideration, 54 respondents (22.5%) who had previously indicated that they had driven while intoxicated, repeated this deviant behaviour when returning home from the last social gathering they attended.

In summary, the findings from Table 6.3a and 6.3b help to substantiate that past behaviour serves as a potential indicator of future behaviour. These findings, further highlight the necessity of measuring past behaviour as a means to more accurately determine the sincerity of respondents' behavioural intentions, particularly in relation to fear appeal approaches.

6.4 RELIABILITY OF MEASUREMENT INSTRUMENT

To assess the reliability of the measurement instrument, a Cronbach Alpha analysis was conducted for each protection motivation construct, namely vulnerability, severity, response efficacy, self-efficacy, fear and behavioural intent. Moreover, each construct's reliability was assessed across all experimental groups, namely the statement-physical group, statement-social group, question-physical group and question-social group. Once the reliability for each construct had been determined, the reliability of the measurement instrument across all experimental groups was also measured. Table 6.4 indicates the Cronbach Alpha value for each group.

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Table 6.4: Cronbach Alpha Scores of Questionnaire Groups

		Question-based Warning		Statement-based Warning	
	Construct	Physical Risk	Social Risk	Physical Risk	Social Risk
Cronbach Alpha Value	Vulnerability	0.809	0.848	0.851	0.852
	Severity	0.807	0.834	0.859	0.820
	Response Efficacy	0.768	0.780	0.774	0.766
	Self-efficacy	0.787	0.773	0.836	0.808
	Fear	0.957	0.949	0.944	0.952
	Behavioural Intentions	0.836	0.801	0.850	0.839
	Entire Measurement Instrument	0.893	0.909	0.911	0.899

As depicted in Table 6.4, each construct demonstrated a Cronbach Alpha value above 0.7, with most values between 0.8 and 0.9. According to Zikmund and Babin (2010:324), Cronbach Alpha values of 0.7, or between 0.8 and 0.95 indicate good reliability, and very good reliability, respectively.

Therefore, based on the values reported in Table 6.4, it was concluded that the measurement instrument and its pre-designed items demonstrated very good reliability. Upon confirmation that the measurement instrument, and subsequently the data that it obtained, was reliable, the inferential analyses commenced.

6.5 INFERENTIAL ANALYSES ON CONSUMERS' PROTECTION MOTIVATION

All seven research hypotheses were analysed using Statistica. Specifically, a three-way analysis of variance (ANOVA), using a 95% confidence interval, was conducted for each of the six protection motivation components, namely vulnerability, severity, fear, response efficacy, self-efficacy and behavioural intent.

In other words, six three-way ANOVAs were conducted, with the independent variables including the different fear appeal approaches (i.e. statements and questions), different types of perceived risk (i.e. physical and social) as well as gender (i.e. male and female).

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Based on the hierarchical nature of the research objectives, the findings of this study will be detailed in order of import. Additional tabular data not displayed in this chapter can be found in Appendix G.

6.5.1 The Influence of Different Fear Appeal Approaches

Firstly, in order to investigate whether different fear appeal approaches influence consumers' protection motivation differently, the following hypothesis was tested by means of a three-way ANOVA (95% confidence interval):

H_0^1: There is no difference between the influence of question-based warnings and statement-based warnings on the components of the PMT

The results of this analysis can be seen in Table 6.5. Importantly, the testing of each PMT component served as a sub-hypothesis and is illustrated as such by means of the letters (a) – (f).

Table 6.5: Summary of Results for Question- versus Statement-based Warnings

Variable	Question Mean ($\bar{x}$)	Statement Mean ($\bar{x}$)	$\bar{x}$ Difference	F-value	p-value
H_0^{1a}: Vulnerability	4.55	4.56	0.01	0.02	0.88
H_0^{1b}: Severity	4.40	4.41	0.01	0.09	0.76
H_0^{1c}: Fear	2.61	2.66	0.05	0.72	0.39
H_0^{1d}: Response Efficacy	4.26	4.26	0.00	0.03	0.86
H_0^{1e}: Self-efficacy	4.23	4.30	0.07	2.50	0.11
H_0^{1f}: Behavioural Intent	3.41	3.50	0.09	2.73	0.09

As can be seen in Table 6.5, none of the p-values were statistically significant ($p < 0.05$). Therefore, H_0^1, could not be rejected. In other words, utilising different fear appeal approaches does not influence consumers' protection motivation differently.

6.5.2 The Influence of Different Types of Perceived Risk

The second objective addressed whether different types of perceived risk influence consumers' protection motivation differently. Subsequently, H_0^2: There is no difference between the influence of physical risks and social risks on the components of the PMT, was tested by means of a three-way ANOVA (95% confidence interval). Table 6.6 details the outcome of this analysis.

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Table 6.6: Summary of Results for Physical versus Social Risks

Variable	Physical Risk Mean ($\bar{x}$)	Social Risk Mean ($\bar{x}$)	$\bar{x}$ Difference	F-value	p-value
H_0^{2a}: Vulnerability	4.59	4.52	0.07	1.85	0.17
H_0^{2b}: Severity	4.46	4.35	0.11	7.55	0.00
H_0^{2c}: Fear	2.53	2.72	0.21	15.22	0.00
H_0^{2d}: Response Efficacy	4.28	4.24	0.04	0.64	0.42
H_0^{2e}: Self-efficacy	4.32	4.20	0.12	4.85	0.02
H_0^{2f}: Behavioural Intent	3.51	3.40	0.11	2.88	0.08

Key: ■ statistically significant at 95% □ not statistically significant

As depicted in Table 6.6, three variables revealed statistically different means ($p < 0.05$): severity, fear and self-efficacy. Therefore, the hypotheses pertaining to these statistically significant variables, namely H_0^{2b}, H_0^{2c} and H_0^{2e}, were rejected. In other words, there is a difference between the influence of physical risks and social risks on severity, fear and self-efficacy.

Considering that the mean differences for vulnerability, response efficacy and behavioural intent were not statistically significant, H_0^{2a}, H_0^{2d} and H_0^{2f}, could not be rejected. Consequently, there is no difference between the influence of physical risks and social risks on vulnerability, response efficacy and behavioural intent.

6.5.3 The Influence of Different Fear Appeal Approaches and Perceived Risks

The third objective investigated whether different fear appeal approaches and perceived risks influence consumers' protection motivation differently. To realise this objective, a three-way ANOVA (95% confidence interval) was used to assess H_0^3: There is no difference between the influence of question-based warnings and statement-based warnings as well as physical risks and social risks on the components of the PMT. Table 6.7 provides a summary of the results.

As is evident from Table 6.7, none of the variables demonstrated a p-value below 0.05. Therefore, the interaction between different fear appeal approaches and perceived risks was not statistically significant and H_0^3 could not be rejected.

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Table 6.7: Summary of Results for Question- versus Statement-based Warnings and Physical versus Social Risks

	Question		Statement			
Variable	Physical Risk Mean ($\bar{x}$)	Social Risk Mean ($\bar{x}$)	Physical Risk Mean ($\bar{x}$)	Social Risk Mean ($\bar{x}$)	F-value	p-value
H_0^{3a}: Vulnerability	4.59	4.52	4.59	4.52	0.56	0.45
H_0^{3b}: Severity	4.45	4.36	4.47	4.34	0.00	1.00
H_0^{3c}: Fear	2.49	2.72	2.58	2.74	0.14	0.70
H_0^{3d}: Response Efficacy	4.30	4.23	4.26	4.26	1.18	0.27
H_0^{3e}: Self-efficacy	4.27	4.19	4.37	4.23	0.00	0.97
H_0^{3f}: Behavioural Intent	3.49	3.35	3.53	3.46	2.59	0.10

In other words, the combined effect of question- versus statement-based warnings and physical versus social risks does not influence consumers' protection motivation differently.

6.5.4 The Influence of Gender

To realise objective four, whether gender influences consumer protection motivation differently, H_0^4: There is no difference between the influence of males and females on the components of the PMT, was assessed by means of a three-way ANOVA (95% confidence interval).

The results, as depicted in Table 6.8, helped to provide insight relating to the gender differences on consumers' protection motivation, as well as the subsequent analyses of hypotheses H_0^4 - H_0^6.

Table 6.8: Summary of Results for Males versus Females

Variable	Male Mean ($\bar{x}$)	Female Mean ($\bar{x}$)	$\bar{x}$ Difference	F-value	p-value
H_0^{4a}: Vulnerability	4.41	4.67	0.26	66.14	0.00
H_0^{4b}: Severity	4.29	4.51	0.22	40.13	0.00
H_0^{4c}: Fear	2.61	2.65	0.04	0.72	0.31
H_0^{4d}: Response Efficacy	4.19	4.32	0.13	12.15	0.00
H_0^{4e}: Self-efficacy	4.10	4.40	0.30	53.88	0.00
H_0^{4f}: Behavioural Intent	3.27	3.61	0.34	68.69	0.00

Key: ■ statistically significant at 95% □ not statistically significant

As can be seen in Table 6.8, the mean differences for males and females across the components of the PMT were all statistically significant ($p < 0.05$), except for fear

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which was not statistically significant. Therefore, all H_0^4 hypotheses were rejected, except for H_0^{4c}, which could not be rejected. In other words, whether a respondent is male or female does influence their perceived vulnerability, severity, response efficacy, self-efficacy and behavioural intent differently.

6.5.5 The Influence of Different Fear Appeal Approaches and Gender

To investigate the fifth objective, namely whether gender and different fear appeal approaches influence consumers' protection motivation differently, a three-way ANOVA (95% confidence interval) was used to analyse the corresponding hypothesis, H_0^5: There is no difference between the influence of males and females as well as question-based warnings and statement-based warnings on the components of the PMT. The outcome of this analysis can be seen in Table 6.9.

Table 6.9: Summary of Results for Males versus Females and Question- versus Statement-based Warnings

	Question		Statement			
Variable	Male Mean ($\bar{x}$)	Female Mean ($\bar{x}$)	Male Mean ($\bar{x}$)	Female Mean ($\bar{x}$)	F-value	p-value
H_0^{5a}: Vulnerability	4.44	4.64	4.38	4.71	3.46	0.06
H_0^{5b}: Severity	4.31	4.48	4.26	4.53	1.23	0.26
H_0^{5c}: Fear	2.63	2.60	2.60	2.71	2.43	0.11
H_0^{5d}: Response Efficacy	4.19	4.33	4.20	4.32	0.04	0.83
H_0^{5e}: Self-efficacy	4.11	4.32	4.09	4.48	4.02	0.04
H_0^{5f}: Behavioural Intent	3.31	3.50	3.22	3.74	13.61	0.00

Key: statistically significant at 95% | not statistically significant | statistically significant at 90%

From Table 6.9 it is evident that self-efficacy and behavioural intent demonstrate statistical differences ($p < 0.05$). Therefore, H_0^{5e} and H_0^{5f} were rejected, as the results indicate that gender and different fear appeal approaches do in fact influence self-efficacy and behavioural intent differently.

Considering this finding, the respective post hoc analyses were examined. Table 6.10 and 6.11 reveal the significant differences between the variables for self-efficacy and behavioural intent respectively. Importantly, the significant interactions are highlighted for ease of comparison.

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Table 6.10: LSD Post Hoc Analysis for Self-Efficacy

			Interaction			
Interaction	Different Fear Appeal Approaches	Gender	1	2	3	4
1	Question-based Warning	Male		0.000	0.783	0.000
2	Question-based Warning	Female	0.000		0.000	0.003
3	Statement- based Warning	Male	0.783	0.000		0.000
4	Statement- based Warning	Female	0.000	0.003	0.000	

From Table 6.10, it is evident that all interactions were significant, except for the interaction between male respondents and their perceived self-efficacy regarding question- and statement-based warnings (cells 1 and 3).

In other words, different fear appeal approaches (question- versus statement-based warnings) for males do not influence self-efficacy differently. However, different fear appeal approaches in terms of females do influence self-efficacy differently, as well as the interaction between gender and different fear appeal approaches.

In a similar vein, Table 6.11 displays comparable results to that of Table 6.10. Specifically, all gender and fear appeal approach interactions were significant, except for the male interaction across question- and statement-based warnings (cells 1 and 3). In essence, different fear appeal approaches in terms of males do not influence their behavioural intent differently.

Table 6.11: LSD Post Hoc Analysis for Behavioural Intent

			Interaction			
Interaction	Different Fear Appeal Approaches	Gender	1	2	3	4
1	Question-based Warning	Male		0.000	0.178	0.000
2	Question-based Warning	Female	0.000		0.000	0.000
3	Statement- based Warning	Male	0.178	0.000		0.000
4	Statement- based Warning	Female	0.000	0.000	0.000	

Contrary to this finding for males, different fear appeal approaches in terms of females do influence behavioural intent differently, as well as the interaction between gender and different fear appeal approaches.

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In terms of hypotheses H_0^{5a} - H_0^{5d}, although vulnerability (H_0^{5a}) was approaching significance at a p-value of 0.06, the resultant differences were found to not be statistically significant. Consequently, these hypotheses could not be rejected, indicating that gender and different fear appeal approaches do not influence vulnerability, severity, fear and response efficacy differently.

6.5.6 The Influence of Different Perceived Risks and Gender

The sixth objective sought to investigate whether different perceived risks and gender influence consumers' protection motivation differently. To realise this objective, a three-way ANOVA (95% confidence interval) was used to assess H_0^6: There is no difference between the influence of males and females as well as physical risks and social risks on the components of the PMT. Table 6.12 provides a summary of these results.

Table 6.12: Summary of Results for Physical versus Social Risks and Males versus Females

	Physical Risk		Social Risk			
Variable	Male Mean ($\bar{x}$)	Female Mean ($\bar{x}$)	Male Mean ($\bar{x}$)	Female Mean ($\bar{x}$)	F-value	p-value
H_0^{6a}: Vulnerability	4.42	4.71	4.41	4.63	0.92	0.33
H_0^{6b}: Severity	4.31	4.58	4.27	4.43	3.05	0.08
H_0^{6c}: Fear	2.50	2.55	2.70	2.76	0.02	0.87
H_0^{6d}: Response Efficacy	4.20	4.35	4.18	4.30	0.21	0.64
H_0^{6e}: Self-efficacy	4.13	4.46	4.07	4.33	4.02	0.45
H_0^{6f}: Behavioural Intent	3.30	3.67	3.24	3.55	0.08	0.77

Key: ▢ statistically significant at 90% ☐ not statistically significant

As can be seen in Table 6.12, although severity was approaching significance at a p-value of 0.08, none of the variables demonstrated a p-value below 0.05. Therefore, the interaction between different perceived risks and gender was not statistically significant. Subsequently, H_0^6 could not be rejected, suggesting that differences between males and females, as well as physical and social risks, do not influence consumers' protection motivation differently.

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6.5.7 The Influence of Different Fear Appeal Approaches, Different Types of Perceived Risks and Gender

The final objective sought to investigate whether different fear appeal approaches, different perceived risks and gender influence consumers' protection motivation differently. To realise this objective, a three-way ANOVA (95% confidence interval) was conducted with reference to H_0^7: There is no difference between the influence of males and females as well as physical risks and social risks as well as question-based warnings and statement-based warnings on the components of the PMT. Table 6.13 reveals the findings of this analysis.

Table 6.13: Summary of Results for Question- versus Statement-based warnings and Physical versus Social Risks and Males versus Females

	Question-based Warning				Statement-based Warning					
	Physical Risk		Social Risk		Physical Risk		Social Risk			
Variable	Male	Female	Male	Female	Male	Female	Male	Female	F-value	p-value
H_0^{7a}: Vulnerability	4.48	4.68	4.41	4.61	4.36	4.74	4.40	4.66	0.66	0.41
H_0^{7b}: Severity	4.36	4.53	4.26	4.44	4.25	4.62	4.28	4.41	3.21	0.07
H_0^{7c}: Fear	2.53	2.45	2.71	2.73	2.47	2.65	2.70	2.80	0.69	0.40
H_0^{7d}: Response Efficacy	4.23	4.36	4.15	4.30	4.17	4.33	4.22	4.30	0.32	0.56
H_0^{7e}: Self-efficacy	4.16	4.37	4.06	4.28	4.11	4.55	4.08	4.40	0.67	0.41
H_0^{7f}: Behavioural Intent	3.37	3.59	3.25	3.43	3.22	3.74	3.23	3.73	0.01	0.93

Key: ▢ statistically significant at 90% ▢ not statistically significant

As per Table 6.13, one can conclude that none of the interactions were statistically significant, despite severity approaching significance at a p-value of 0.07. Therefore, H_0^7 could not be rejected, meaning that the combined effect of males versus females and physical versus social risks and question- versus statement-based warnings, does not influence consumers' protection motivation differently.

6.5.8 Summary of Inferential Analyses

Each of the study's hypotheses has been assessed, thereby helping to realise the respective research objectives. Table 6.14 provides a concise summary of each of the objectives, as well as the inferential results per their subsequent hypotheses. More specifically, for each of the statistically significant results, the p-values, F-values as well as the absolute mean values are provided.

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Table 6.14: Summary of Inferential Results

	Vulnerability	Severity	Fear	Response Efficacy	Self-efficacy	Behavioural Intent
Objective 1: Question vs Statement						
Objective 2: Physical Risk vs Social Risk		p = 0.006 F = 7.55 Phy > Soc 4.46 > 4.35	p = 0.000 F = 15.22 Phy < Soc 2.53 < 2.73		p = 0.027 F = 4.84 Phy > Soc 4.32 > 4.20	
Objective 3: Question/Statement vs Physical/Social Risk						
Objective 4: Male vs Female	p = 0.000 F = 66.14 Fem > Male 4.67 > 4.48	p = 0.000 F = 40.12 Fem > Male 4.51 > 4.29		p = 0.000 F = 12.15 Fem > Male 4.32 > 4.19	p = 0.000 F = 53.88 Fem > Male 4.40 > 4.10	p = 0.000 F = 68.69 Fem > Male 3.61 > 3.27
Objective 5: Question/Statement vs Male/Female					p = 0.045 F = 4.02 Females: Ques < Stat 4.32 < 4.48	p = 0.000 F = 13.61 Females: Ques < Stat 3.50 < 3.74
Objective 6: Physical/Social Risk vs Male/Female						
Objective 7: Question/Statement vs Physical/Social Risk vs Male/Female						

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6.6 SYNOPSIS

The focus of this chapter has been placed on analysing this study's data and communicating the respective results in accordance with this study's research objectives. The two-part nature of this chapter began with identifying the insights obtained from the focus groups, after which a brief discussion of the experimental stimuli selection process took place. Thereafter, the remaining sections delved into presenting and explaining the quantitative findings.

Initially, a profile of the sample was examined, followed by the determination of the measurement instrument's validity. Thereafter, an in-depth exploration of the relevant research objectives and their corresponding hypotheses was conducted. In summary, a handful of hypotheses failed to be rejected, thereby indicating that consumers' protection motivation can be influenced differently by specific variables identified in this study.

Chapter 7 will delve further into the reasoning behind the findings presented here, with particular emphasis being placed on the managerial implications of these findings, as well as the limitations of this study. Future research prospects that this study could hold, will also be considered.

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CHAPTER 7

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

Throughout this study, the importance of identifying a more effective fear appeal approach to the current statement-based warnings, has been emphasised. Conjointly, determining which type of perceived risk is more effective in altering consumers' protection motivation, has also served as a poignant theme during the course of this study. Consequently, this study has addressed the hypothesised differential influence that different fear appeal approaches and different types of perceived risk have on consumers' protection motivation. Importantly, the findings and subsequent conclusions of this study are only applicable to generation Y consumers.

Against this background, the current chapter reports this study's findings as presented in the previous section. In the first instance, the quantitative conclusions will be discussed according to the objective that it addressed, drawing on the insights obtained from the focus groups. Thereafter, the managerial implications that this study's findings suggest, will be addressed. Finally, the limitations of this study will be discussed, concluding with considerations for future research.

7.2 CONCLUSIONS

This study pursued seven hierarchical research objectives. Each objective sought to investigate the factors that could influence generation Y consumers' protection motivation differently, to deter the deviant conduct of drinking-and-driving. More specifically, two factors were identified as potential influencers in this regard, namely different fear appeal approaches and different types of perceived risk.

7.2.1 Objective 1: Different Fear Appeal Approaches

The primary objective was to investigate whether different fear appeal approaches influence consumers' protection motivation differently. Subsequently, measures of each PMT component were compared for question- and statement-based warnings. The results revealed that question-based warnings do not influence any of the PMT components differently than statement-based warnings.

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In other words, whether the current fear appeal approach (i.e. statement-based warnings) or the proposed fear appeal approach (i.e. question-based warnings) is used is inconsequential, as neither approach influences consumers' protection motivation differently. This finding contradicts that of Glock *et al.* (2012:257) and Müller *et al*. (2014:257-8), both of whom found question-based warnings to be more effective in comparison to statement-based warnings. A possible reason for this discrepancy can be the level of cognition and involvement that question-based warnings require from respondents.

A study on social issue involvement by Griffin and O'Cass (2004:120) suggested that the extent to which a consumer is involved in a specific social issue, such as drinking-and-driving, influences their attitude and subsequent behavioural intentions regarding that issue. More specifically, their findings revealed that high involvement with a social issue, relates to a more positive attitude toward that issue (Griffin and O'Cass, 2004:120). Of particular importance though, is their suggestion that consumers who do not undertake the negative behaviour, as opposed to those who do, are more likely to be issue-involved, resulting in more positive attitudes towards that issue (Griffin and O'Cass, 2004:121-2).

In other words, because social marketing messages are often both unpalatable and undesirable in terms of the knowledge it is disseminating (Cummings, 2012:26), those who are currently engaging in the negative behaviour do not want to be involved with the message given its relevance to them. As a result of this high level of relevance, they engage in defensive mechanisms (van't Riet and Ruiter, 2013:S105), subsequently exhibiting low issue involvement. This low involvement with the message, could lead to the peripheral route of persuasion being undertaken and the message being processed heuristically (Lewis *et al*., 2008:404). Subsequently, the likelihood of a change in behavioural intentions, under heuristic processing, was diminished (Vidrine *et al*., 2007:94).

Support for this conclusion can be found in the focus group discussions where respondents indicated that "drinking-and-driving is not a pleasant topic" and that they "don't want to think about the consequences because [they] know [they]'re going to do it [again]". Therefore, the relevance of the drinking-and-driving consequences may have resulted in the respondents' low issue involvement, subsequently diminishing

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their motivation to process the message systematically, and resulting in the heuristic processing of the message.

Moreover, the literature suggests that question-based warnings, which encourage the use of self-generated arguments, increase a consumer's involvement in a message (Müller *et al*., 2014:253), thereby resulting in the systematic processing of that message and the increased likelihood of behavioural change. Therefore, it stands to reason that in the absence of a self-generated argument, the effectiveness of a question-based warning cannot be realised.

Findings from the focus group discussions support this deduction, as it was revealed that respondents did not engage with the question-based warnings. Instead, they chose to read the warnings without generating their own arguments in response to the question being posed, stating that they "don't have the time or energy to think about [the question]." Given the identical nature of both the qualitative and quantitative sample, these qualitative results provide a possible explanation for the quantitative findings.

In other words, there appears to be a mismatch between the level of cognitive effort that the question-based warning required of respondents and the level that they were willing to devote. Given that the question-based warning was designed to engage respondents, thereby enabling them to generate their own arguments in response to the question, a high level of cognition was required. However, it appears as if respondents were only willing to exert minimum cognitive effort due to their low involvement with the drinking-and-driving issue. As a result, heuristic processing, which in comparison to systematic processing results in less enduring attitude and behaviour changes, would have been undertaken.

On the whole it appears as if the question-based warning evoked a lower level of consumer involvement than originally theorised, thereby rendering this approach's effectiveness as equivalent to that of statement-based warnings. Consequently, question-based warnings cannot be considered to be more effective than statement-based warnings for generation Y South Africans against the background of drinking-and-driving.

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7.2.2 Objective 2: Different Types of Perceived Risk

In the second instance, the objective was to investigate whether physical risks and social risks influence consumers' protection motivation differently. Findings in Chapter 6 revealed partial support for the differential effect that different types of perceived risk have on some of the PMT components, namely severity, fear and self-efficacy.

Essentially, respondents felt that a physical risk was more severe than a social risk and that when faced with a physical risk, they would be more capable of implementing the recommended coping response. This finding is in line with other studies, which stress the importance of physical risks in road safety contexts for some members of the target population (Lewis *et al*., 2007:49; Wundersitz *et al*., 2010:21). Focus group insights further help to support this finding as consensus amongst the respondents indicated that physical risks were perceived as worse than social risks.

However, despite the increased severity and self-efficacy findings for physical risks, respondents experienced increased fear levels when confronted with a social risk. This finding can be explained by literature pertaining to generation Y individuals.

While generation Y is considered to be individualistic, and therefore affected by physical risks which threaten the self, as indicated by literature and confirmed by the results of this study, they also have a strong group-orientation (McCrindle, 2003; Valentine and Powers, 2013:598). Based on his research, McCrindle (2003) suggests that generation Y individuals are largely influenced by their peers and as a result, their self-esteem often rests on how well they are regarded within their social group. Moreover, generation Y individuals demonstrate a strong loyalty to their friends (McCrindle, 2003). In light of the importance of this reference group to the target population, it becomes evident that the social risk, which threatened a respondent's image amongst their friends, could have resulted in increased fear levels in comparison to the physical risk.

A further reason as to why the social risk resulted in increased fear levels, can be attributed to the nature of the consequence: jail. A study investigating the relevant consequences in anti-drinking-and-driving fear appeals amongst young drivers, found that above the physical risks that anti-drinking-and-driving campaigns emphasised,

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being charged for driving while under the influence (DUI) was most feared by respondents (Gotthoffer, 1998:29). Based on this finding, Gotthoffer (1998:36) suggested that jail as a consequence of drinking-and-driving, should be used in social marketing campaigns to discourage this negative behaviour. Similar findings were revealed in the focus groups where, when respondents were asked to identify some of the consequences of drinking-and-driving, jail was one of the first consequences to be mentioned. Moreover, respondents stressed the seriousness of this consequence, with some respondents expressing their preference for death rather than going to jail.

Considering these aforementioned inferences, it can be concluded that physical risks hold more promise for behavioural change than social risks in a drinking-and-driving context. While the social risk evoked greater levels of fear than physical risk, this increased level of fear did not result in increased perceptions of efficacy or behavioural intent, alluding to the presence of defensive mechanisms. This supposition is in line with other studies which suggested that an increased level of fear, without an increase in efficacy, resulted in defensive mechanisms (Job, 1988:165; Tay, 2002:199) and ultimately no change in behaviour.

7.2.3 Objective 3: Different Fear Appeal Approaches and Different Types of Perceived Risk

The third objective investigated the potential interaction between question- and statement-based warnings and physical and social risks on consumers' protection motivation. In a similar vein to the Objective 1 findings, the combined effect of different fear appeal approaches and different types of perceived risk were found to not influence consumers' protection motivation differently.

Subsequently, utilising different comparisons of fear appeal approaches and perceived risks is trivial, as the lack of interaction between these factors does not result in a differential effect on consumers' protection motivation. In other words, regardless of the risk that is emphasised, question-based warnings still invoke a low level of involvement from individuals, as well as requiring them to invest too much cognitive effort, thus rendering this approach as ineffective as statement-based warnings.

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7.2.4 Objective 4: Gender

In terms of gender's differential impact on consumers' protection motivation, the findings indicated that gender does influence the manner in which a respondent perceives a threat, their efficacy in dealing with the threat as well as their behavioural intent towards the behaviour in question. This result is consistent with the findings of Lewis *et al*. (2007:58) who found that gender is an important consideration when designing and evaluating the effectiveness of fear-based road safety messages.

To be precise, males and females exhibited significantly different perceptions regarding vulnerability, severity, response efficacy, self-efficacy and behavioural intent. Furthermore, for each of these components, females demonstrated consistently higher perceptions of risk, efficacy and protective behavioural intent. These finding are consistent with the results of Gonzalez-Iglesias *et al*. (2015:349) who found that females feel more self-efficacious in avoiding drinking-and-driving behaviour, thereby increasing their intent to engage in protective behaviour. Subsequently, the importance of self-efficacy in preventing engagement in socially undesirable behaviours, was demonstrated. Given that self-efficacy has been emphasised as moderating the differential effect of social marketing messages on consumers' protection motivation (Rogers, 1983:170; Cismaru *et al*., 2009:7; Manyiwa and Brennan, 2012:1432-3; Müller *et al*., 2014:6), this finding therefore lends further support to the importance of this PMT component.

The fact that males did not exhibit any differential effects in terms of their protection motivation after exposure to the stimuli, confirms prior findings which suggest that those most at risk to a threat, are the most resistant to social marketing messages that are targeted at them (Ulleberg, 2002:293; Kessels *et al*., 2010:346). Specifically within the realm of road safety, evidence suggests that young males, who are most at risk of being involved in a road accident (Lewis *et al*., 2008:414; Viljoen *et al*., 2009:120), are the least responsive to road safety fear appeals (Lewis *et al*., 2007:207; Sibley and Harré, 2009:160). Literature pertaining to road safety suggests two main reasons for males' lack of change regarding their risk, fear and efficacy perceptions, as well as their behavioural intentions: comparative optimism and the third person effect.

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In the first instance, comparative optimism affects an individual's perceived risk by means of the belief that the risk for themselves is lower than the risk for their peers (Renner and Schwarzer, 2003:175). This is a dangerous effect as those who are comparatively optimistic, hold a false sense of security, thus preventing them from taking protective measures (Ruthig *et al*., 2007:347). Jonah (1986:263) as well as Tränkle, Gelau and Metker (1990:123) found that young drivers, and males in particular, demonstrated strong tendencies of comparative optimism, thereby helping to explain young males' high level of involvement in road accidents. In other words, the potential for young male drivers to perceive their risk of being involved in a road accident as lower than that of their peers, could account for the lack of perceived risk increments in this study's male sub-sample.

Findings from the male focus group provide further support for the proposed effects of comparative optimism in the male sample. Essentially, male respondents expressed their decreased vulnerability to the effects of alcohol in comparison to their peers, stating that "I can have 10 brandies and be fine and you can have 10 brandies and be drunk". In other words, young males' tend to believe that they have an increased tolerance for alcohol consumption and that the negative effects of alcohol apply to their peers rather than themselves. This belief, although flawed, assists in explaining males' decreased perceptions of vulnerability to a risk and their subsequent lack of motivation to engage in protective behaviour.

Additional insights from the male focus group provide further suggestions as to why males demonstrated lower perceptions of response efficacy and self-efficacy than females. The males indicated that whether they were the designated driver or not, influenced how much alcohol they would consume on the given night. Essentially, this meant that even though they were assigned as the driver for the evening, they would still drink; however, the volume of alcohol consumed would be far less than if they were not driving.

The possible reasoning behind this behaviour was provided by two male respondents in the focus groups who suggested that (1) they had a high tolerance for alcohol consumption, and that (2) after taking special precautions such as eating carbohydrates and drinking water intermittently, they could consume more alcohol without becoming intoxicated.

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Interestingly, the belief that these respondents possessed a high tolerance for alcohol consumption contradicted previous findings which suggested that young drivers are less alcohol tolerant than adults (Gonzalez-Iglesias *et al*., 2015:345). This realisation further supports the notion that this sample's males hold inaccurate perceptions.

While these aforementioned beliefs were not held by all of the male respondents, the group discussion revealed that some males within a population believe that they do not need to abstain from drinking-and-driving because they possess a high tolerance for alcohol consumption and because the aforementioned special precautions allow them to consume alcohol and still be 'okay to drive'. The existence of these special precautions, as well as males' perceived high tolerance for alcohol consumption, alludes to the possibility that males might not perceive the recommended coping response (i.e. calling a taxi after drinking) as necessary in overcoming the risks that drinking-and-driving presents. Consequently, the extent to which males perceived their ability to implement the coping response (i.e. their self-efficacy) would be irrelevant.

In the second instance, the third person effect (TPE) may also explain males' differential protection motivation results to their female counterparts. TPE is a phenomenon that explains the tendency to perceive a persuasive communication as more relevant for, and influential on others (Lewis *et al*., 2007:50). Findings relating to the TPE suggest that males, as opposed to females, perceive road safety messages as being more influential for others than for themselves (Lewis *et al*., 2007:57; Sibley and Harré, 2009:160). Extending these findings to the current study, it appears as if similar results have been found for this male sample. Considering that some focus group males alluded to the recommended coping response being personally unnecessary, thereby implying its necessity for others, the TPE was exhibited.

An alternate explanation for males' low self-efficacy perceptions can be inferred from empirical findings as well as literature pertaining to generation Y individuals. Specifically, Gonzalez-Iglesias *et al*. (2015:349) found that males perceive less disapproval of drinking-and-driving behaviour from their peers. This finding in conjunction with the knowledge that generation Y individuals rely largely on social acceptance from their peers (McCrindle, 2003), indicates that young males might not

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be willing to implement the recommended coping response. In other words, generation Y males might perceive calling a taxi, after the consumption of alcohol, as unnecessary because they believe their friends do not disapprove of drinking-and-driving.

Findings from the focus groups confirm this supposition as both males and females had admitted to drinking-and-driving previously. However, the males were more inclined to believe that 'everyone does it', thereby regarding the behaviour as an acceptable social norm. The males' perceived social acceptability of drinking-and-driving suggests that they find the recommended coping response to be unnecessary, resulting in the limited perceptions of their self-efficacious abilities.

As a whole, given that males possess low perceptions of risk, response efficacy and self-efficacy, they feel no need to initiate protective behaviours.

7.2.5 Objective 5: Different Fear Appeal Approaches and Gender

Objective 5 addressed whether different fear appeal approaches and gender would influence consumers' protection motivation differently. Results in this regard revealed that only the females' self-efficacy and behavioural intent were influenced differently by means of question- and statement-based warnings. More specifically, statement-based warnings evoked greater self-efficacy perceptions and behavioural intent amongst females than question-based warnings. In terms of the males however, the type of fear appeal approach used is inconsequential as different fear appeal approaches do not influence their protection motivation differently.

Based on these findings, two deductions are suggested. Firstly, the current fear appeal approach (i.e. statement-based warning) is more effective for influencing female consumers' self-efficacy and behavioural intent than the proposed fear appeal approach (i.e. question-based warning). Secondly, neither the existing nor the proposed fear appeal approach is effective for male consumers. Similar inferences to those of Objective 1 and 4 can be used to explain these deductions.

Considering the first deduction, the uncomfortable context of both of the warnings (i.e. drinking-and-driving) may have resulted in low issue involvement, given the relevance of the issue for female consumers (Griffin and O'Cass, 2004:121-2). In other words, both fear appeal approaches are rendered equally as ineffective.

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However, as discussed in the inferences pertaining to Objective 1, it is possible that consumers failed to generate their own arguments in response to the question-based warning, given that the question-based warning required respondents to expend a level of cognition that they were not willing to. Considering the positive outcomes that self-generated arguments have realised in other studies (Glock *et al.*, 2012:257; Müller *et al*., 2014:257-8), the absence of a self-generated argument suggests that the beneficial effects of question-based warnings cannot be realised, thereby rendering this alternate fear appeal approach less effective than the statement-based warning.

A further point of consideration is that in comparison to the cognitive effort required from the question-based warnings, the statement-based warnings were easier to understand. As a result, females were able to more easily comprehend what was required of them to overcome the threat (i.e. no drinking-and-driving), allowing for a more accurate understanding of their self-efficacious abilities.

Additionally, past research regarding the factors that make a fear appeal more effective suggested that road safety warnings need to be perceived as realistic by the target population (Viljoen *et al*., 2009:134). Support for this finding was confirmed by the female focus group respondents, who suggested that they were more likely to believe the statement-based warnings as opposed to the question-based warnings, due to the expanse of potential answers that the latter warning allowed for. In other words, this inference suggests that the high cognitive effort required from respondents to answer the question-based warning, left respondents with the perception that the warning was less realistic as it allowed for a variety of possible consequences.

Furthermore, given that self-generated arguments have increased perceptions of credibility (Mussweiler and Neumann, 2000:198), in the absence of a self-generated argument, it stands to reason that the credibility of the message will be brought into question. Consequently, it can be inferred that females' perceptions of realism and credibility regarding statement-based warnings would be greater than for the question-based warnings. Moreover, this increased belief in the content of the message might allow a respondent to adjust their self-efficacy perceptions. In other words, the respondents might be able to more accurately determine the extent to

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which they can implement the recommended coping response, based on their augmented beliefs about the message.

Concerning these aforementioned inferences, as a result of the females' increased self-efficacy perceptions, their behavioural intentions altered accordingly. By means of replicating other studies' self-efficacy findings (Laroche *et al*., 2001:314; Manyiwa and Brennan, 2012:1431-2), this study provides increased support for the notion that self-efficacy is an invaluable consideration regarding behaviour change.

In terms of the males' lack of significant differences regarding different fear appeal approaches, similar inferences to those of Objective 4 can be offered. More specifically, the findings suggest two points of concern. Firstly, it appears as if males perceive a lower level of risk for themselves than that of their peers, otherwise known as comparative optimism, due to their questionable beliefs regarding their apparent high tolerance for alcohol and the adoption of special drinking precautions. Secondly, the findings also suggest that males' decreased efficacy perceptions can be attributed to the TPE. These two phenomena help to provide an explanation for males' lack of change in their risk and efficacy perceptions, respectively.

In other words, males might perceive themselves as less vulnerable to the risks of drinking-and-driving. This decreased perception of risk, in conjunction with the perceived social acceptability of drinking-and-driving amongst their peers, suggests that males find the implementation of the recommended coping response to be unnecessary. Subsequently, their self-efficacy perceptions are inconsequential.

In summary, the deficiency of males' risk and efficacy perceptions, means that the ineffectiveness of the question- and statement-based warnings cannot be overcome, thus resulting in a lack of protection motivation.

7.2.6 Objective 6: Different Types of Perceived Risk and Gender

The purpose of the sixth objective was to investigate the differential influence that different types of perceived risk and gender might have on consumers' protection motivation. The results revealed that there is no difference between physical and social risks and males' and females' influence on consumers' perceptions of the PMT components.

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Despite the fact that when isolated, different types of perceived risks and gender revealed differential PMT effects, the combined effect of these variables was inconsequential. This inconsequentiality of perceived risk in terms of gender suggests that males and females do not demonstrate a preference for the type of risk that evokes a change in behavioural intent.

Literature pertaining to perceived risk emphasises the importance of this component in health-behavioural models, and specifically the PMT (Brewer, Chapman, Gibbons, Gerrard, McCaul and Weinstein, 2007:136; Glock and Kneer, 2009:359). Therefore, the perception of risk is more important than the type of risk that is perceived, in determining males and females' protection motivation behaviour. In other words, as long as a risk is perceived (i.e. consumers perceive the risk as severe and themselves as personally vulnerable), consumers will be more likely to engage in behavioural change, regardless of what that risk pertains to.

This supposition differs from the literature in two ways. Firstly, fear appeal literature suggests that a fear appeal should utilise a threat that is most relevant to a consumer so as to increase perceptions of risk (Lewis *et al*., 2007:58-9). However, as this study's findings indicate, the type of risk used is irrelevant to both genders.

Fear appeal literature further suggests that females are underrepresented in road accidents, due to the effectiveness of physical fear in road safety messages on female consumers' protection motivation (Lewis *et al*., 2007:11). In other words, physical risks are more effective for females than males. Moreover, given the ineffectiveness of physical risks for males, the use of social fear was suggested as a means for increasing males' risk perceptions (Lewis *et a*l., 2007:208). However, once again, this study's results did not reflect either of the two aforementioned findings in the fear appeal literature. These contrasting findings signify the uncertainty that exists in the fear appeal literature regarding the use of different types of risk for the different genders.

7.2.7 Objective 7: Different Fear Appeal Approaches and Different Types of Perceived Risk and Gender

The final objective was concerned with investigating the combined effect of the two potential influencing factors as well as gender on consumers' perceptions of the PMT components. Despite one finding which approached significance, it was determined

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that there is no difference between the influence of different fear appeal approaches, different types of perceived risk and gender on consumers' protection motivation.

Consistent with the inferences from the results related to Objectives 1 and 6, it can be concluded that the inconsequentiality of this three-way interaction effect is due to the combined ineffectiveness of (1) the different fear appeal approaches and (2) the interaction between gender and the different types of perceived risk on consumers' protection motivation.

In other words, the question-based warnings still engaged consumers in low involvement, required them to expend too much cognitive effort and did not result in self-generated arguments, thereby rendering them as ineffective as statement-based warnings. Moreover, perceptions of risk have been suggested as being more important than the type of risk that males and females perceive. Therefore, the combined effect of these interactions resulted in no differential influence on consumers' protection motivation.

7.3 IMPLICATIONS AND RECOMMENDATIONS OF THIS STUDY

There are four main contributions that emanate from this study. The first contribution pertains to different fear appeal approaches and the specific effectiveness of question- and statement-based warnings, while the second contribution assesses the relevance and effectiveness of physical and social risks in marketing communication. The third contribution involves the identification of important gender differences for marketers, while the final contribution pertains to the significance of this study's findings in countering the negative effects of dangerous road behaviour by means of the design and implementation of more effective anti-drinking-and-driving campaigns.

Each of these contributions holds important implications and should be considered when designing and implementing social marketing communications, and fear appeal messages in particular.

7.3.1 Recommendations Regarding Different Fear Appeal Approaches

Overexposure and the subsequent desensitisation to fear-based communications is a limitation that many social marketing campaigns are faced with (Gallopel-Morvan *et al*., 2011:10). Therefore, despite the relative ineffectiveness of question-based warnings, this alternate fear appeal approach can be used to overcome the negative

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effects that overexposure has on a campaign's effectiveness. In other words, rather than re-using dated statement-based fear appeals, question-based warnings should be utilised to break through the clutter and regain consumers' attention, given that they are shown to be as effective as the current fear appeal approach.

However, the introduction of a question-based social marketing campaign would be costly. Therefore, a trade-off between cost and the negative effects of overexposure will need to be made. Regardless of which fear appeal approach is selected however, it is recommended that the wording of a fear appeal be given special attention.

Specifically, if question-based warnings are utilised, the word "how" should be avoided as consumers' responded negatively to this word stating that it "isn't very powerful". Moreover, words that suggest an event is going to occur, such as "will", should be avoided, as these words decrease the reliability and believability of the message. As an example, the warning "drinking-and-driving will kill you", could be re-worded to "if you drink-and-drive, you could die". Additionally, it is important to ensure that offensive taglines such as "If you drink-and-drive, you are a killer", are avoided as qualitative findings revealed that these warnings are ignored due their lack of perceived realism.

7.3.2 Recommendations Regarding Different Types of Perceived Risk

While this study's findings revealed significant differences between the different types of perceived risks in isolation, the effect of physical and social risk across gender was insignificant. Based on these findings, social marketing campaigns should not yet employ different types of perceived risk in their communication, as doing so would result in increased costs, without any significant benefit. Rather, existing physical risks should be used until such time as a more effective alternative has been confirmed, as social risks have been found to play on generation Y's concern for their social standing amongst their peers, thereby evoking high levels of fear as well as defensive mechanisms.

Of particular importance, however, is that consumers must perceive a risk (i.e. they must perceive their vulnerability to and the severity of the risk). In this regard, the importance of pre-testing campaign messages on a sample of the target audience cannot be overstated.

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One recommendation for increasing risk perceptions relates to the propinquity of the risk. According to Delaney, Lough, Whelan and Cameron (2004:11), a risk which is perceived as posing an imminent threat, will be more effective than a risk that may manifest in the distant future. Therefore, social marketing messages should be worded in a manner which reflects the immediacy of a risk, such as “Drinking-and-driving can kill you in an instant”. In doing so, risk perceptions might increase, resulting in a differential influence on consumers’ protection motivation.

7.3.3 Recommendations Regarding Gender

The findings in relation to gender indicate the importance of this demographic variable. Therefore, it is essential that gender is considered when designing and implementing a social marketing campaign. More specifically, findings in this study as well as the marketing literature have revealed that males and females not only process information differently, therefore increasing their differential risk and efficacy perceptions, but they also possess differential beliefs regarding the same behaviour, due to phenomena such as comparative optimism and TPE. It is these differential beliefs that often result in the observed gender effect.

Consequently, each social marketing campaign should strive to identify the individuals that are most at risk. Should this assessment reveal significant gender differences, the campaign and its messages should be designed accordingly. Based on the findings from this study, anti-drinking-and-driving campaigns should target male consumers as they are most at risk. However, should an anti-drinking-and-driving campaign be targeted at female consumers, statement- as opposed to question-based warnings should be used due to females’ increased self-efficacy perceptions and behavioural intentions in this regard.

7.3.4 Additional Recommendations

Apart from the recommendations based on the aforementioned findings, further recommendations pertaining to various observations throughout this study will also be conveyed.

An important consideration when designing an effective anti-drinking-and-driving campaign is the placement of a message. Throughout this study, respondents made reference to drinking-and-driving fear appeals on the road (i.e. billboards) and the

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influence that it has on their current behaviour. The example of speeding was given and respondents concurred that when confronted with the anti-speeding warning, they would slow down. The immediacy hypothesis provides an understanding for this behaviour by means of predicting that social marketing messages will have the greatest effect on behaviour if presented as close as possible to the relevant situation (Glendon and Cernecca, 2003:199).

According to this hypothesis, the sole use of billboards in anti-drinking-and-driving campaigns is ineffective. Instead, anti-drinking-and-driving warnings should also be strategically placed at the point of consumption. In other words, apart from the restaurants, bars, night clubs and other social venues displaying anti-drinking-and-driving warnings, the alcohol bottles themselves should be the focal medium of these road safety campaigns. Research into the potential effectiveness of this communication medium can also be conducted.

A further miscellaneous recommendation relates to policy makers and the theory of deterrence. The main assumption of this theory is that consumers who perceive a high likelihood of detection and subsequent punishment, will be less likely to engage in deviant behaviour such as drinking-and-driving (Glendon and Cernecca, 2003:212). Therefore, policy-makers should ensure increased law enforcement visibility on roads, but more so at places of consumption. By means of increased visibility in areas where consumers are known to engage in drinking-and-driving behaviour, such as clubs and other social venues, consumers' perceptions of detection likelihood will increase, resulting in their adoption of safer behaviours (i.e. catching a taxi home).

In summary, this study has provided a number of research-based implications and recommendations that may be of value to both academia and industry. Based on these suggestions, considerations for future research as well as the limitations of this study were determined.

7.4 LIMITATIONS AND FUTURE RESEARCH

This study was subject to certain limitations. These limitations pertained to the sample of this study, the selected experimental stimuli and the manner in which data collection was facilitated.

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The time and financial constraints of this study meant that the sampling process was conducted at a singular place of convenience: Stellenbosch. Moreover, Stellenbosch University and its students were identified as units of convenience and were therefore surveyed. These sampling procedures resulted in three limitations.

The first limitation pertains to the fact that only university students were sampled, thereby calling the external validity of this study into question. However, this limitation was not regarded as a concern because despite the convenience of this population group, university students were also sampled because of their adherence with the target population's qualifying dimensions.

In the second instance, the age distribution within the sample was not widely dispersed among the age category of 18-28 years. Instead, most respondents were between the ages of 19 and 23 years, a discrepancy which was due to a complete list of the target population not being available. While this outcome does represent a limitation, this discrepancy in age distribution was not considered an issue as generation Y consumers share similar characteristics.

A final limitation that pertains to the sample is the limited regional reach of this study which means that the data obtained may be distorted. Despite students coming from all over the country, there is a possibility that the data obtained is not fully representative of the generation Y, South African drinking-and-driving population, but rather only represents a selected area within the Western Cape. Therefore, to account for this potential limitation, future research should expand the scope of this study to fully represent the Western Cape region, as well as the other regional areas in South Africa and the country as a whole.

The stimuli that were selected for use in the experiment represents a further limitation. Although each warning underwent qualitative examination, and only those that evoked similar levels of fear were selected for experimental use, the discrepancy in level of evoked fear between the statement-based physical warning and the other warnings, was high. While this limitation was not considered serious given the measurement instrument's high reliability across the four experimental groups, to increase the internal validity of this research design, future research could replicate this study's design using stimuli that evoked similar levels of fear across experimental groups.

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Lastly, the use of self-reported measures for all the PMT components, and behavioural intent specifically, represents the final limitations of this study. Given, the sensitive nature of drinking-and-driving, social desirability bias may have affected respondents' answers causing some of the responses to be distorted. To dissuade respondents from providing answers which they perceived as socially desirable, complete anonymity was promised to all participants. Moreover, while behavioural intentions are significant predictors of actual behaviour, the intention-behaviour gap does exist. Therefore, measuring behavioural intentions as opposed to actual behaviour limits the extent to which consumers' actual behaviour can be predicted.

Considering these limitations as well as the qualitative and quantitative findings of this study, opportunities for future research can be identified. In the first instance, further research needs to be done to investigate alternate approaches to statement-based fear appeals. Therefore, marketing scholars should invest more time and effort in the discovery of an alternate approach to current fear appeals. This effort could either be directed at improving fear appeal effectiveness or investigating the probability of other marketing communication appeals.

While the empirical findings of this study revealed that question-based warnings are equally as ineffective as statement-based warnings, the context and target population may have influenced these results. Firstly, Stellenbosch is located in the winelands, a consideration which could potentially influence the drinking culture of the town. Moreover, given that generation Y individuals value social acceptance, and that drinking-and-driving is perceived by most generation Y consumers as a social norm, these considerations may have impacted the outcome. Therefore, future research could investigate the use of question-based warnings in different contexts and amongst different consumers. Similarly, future research could also investigate the differential effects that could be obtained if different fear appeal approaches are accompanied by images relating to the study's context.

Furthermore, a possible stream of investigation, as suggested by focus group respondents, could include the combination of an informational appeal (i.e. a fact) with an emotional appeal (i.e. a question-based). This avenue for future research could potentially overcome the limitations of question-based warnings by alleviating the amount of cognitive effort that consumers need to expend by means of the provision of context-related information.

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Findings pertaining to different types of perceived risk also hold important implications. Concerning academia, the conditions for when physical and social risks work best should be more widely investigated. This avenue of research has received limited attention and future social marketing endeavours should address this limitation. More specifically, alternate types of perceived risk, other than the ones investigated in this study, need to be investigated to assess their potential significance in influencing social marketing communication effectiveness. Explorative research methods should be used to possibly identify new types of perceived risks within a social marketing concept. This recommendation is based on a trend that was displayed in the focus groups in which respondents consistently referred to their concern for others and the impact that their individual actions could have on someone else.

Importantly, while the social marketing literature does allude to the variable “concern for others”, this reference is in relation to different cultural orientations, namely individualistic and collectivistic cultures. Given the cultural diversity of South Africa, using this strict dichotomous paradigm is not relevant within a South African context. Therefore, social marketing academia should strive to extend, and possibly bridge a gap in this literature by examining different types of perceived risk in relation to social marketing in a South African cultural context.

The differential effects of gender on social marketing should also be addressed. Research in this regard should focus on males’ and females’ differential risk and efficacy perceptions and behavioural intent. Possible mediating variables, such as information processing, should be examined to better understand this gender effect. Furthermore, in reference to different fear appeal approaches, any subsequent suggested approach should be investigated from a gender perspective to determine whether the observed gender effect in this study holds true in other studies as well.

Finally, based on the limited empirical findings which displayed a change in behavioural intentions, a further point of consideration is that there are different stages in behaviour change. Consequently, the stage in which an individual finds themself, determines the extent to which they are ready and able to engage in behaviour change. Investigating the influence that these different stages have on a consumer’s willingness to change their behaviour, could provide an avenue for future

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research. The potential of using emotions other than fear as a means to evoke behavioural change, could also be investigated.

7.5 OVERALL CONCLUSION

Social marketers have used a number of emotional appeals in the past in an effort to cease consumers' engagement in socially deviant behaviours. Specifically in the realm of drinking-and-driving behaviour, fear appeals in the form of statement-based warnings have been used extensively. Despite this effort, society continues to suffer the effects caused by drinking-and-driving.

Therefore, in an attempt to design effective social marketing campaigns that can effectively address this drinking-and-driving behaviour, the use of question-based warnings, as well as alternate types of risk has been suggested. This study was conducted in order to investigate whether different fear appeal approaches and different types of perceived risk influence consumers' protection motivation differently.

The empirical results revealed that different types of perceived risk, gender and the combined effect of different fear appeal approaches and gender do influence aspects of consumers' protection motivation differently. Based on these empirical findings, three main conclusions were inferred.

Firstly, social marketers should continue to investigate the effectiveness of different fear appeal approaches, as the influence of question- and statement -based warnings is inconsequential on consumers' protection motivation behaviour. Secondly, although physical risks evoked greater protection motivation, further investigation into the different types of perceived risks that can be used in social marketing should be investigated. Importantly, however, regardless of what risk is used, it is essential that consumers actually hold risk perceptions, as this is an important consideration for behavioural change. Finally, gender does influence consumers' protection motivation differently and is an important consideration in both the design and implementation of any future social marketing campaign.

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Appendix A:

Extended Hypotheses

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Hypotheses

Main hypotheses:

H_0^1: There is no difference between the influence of question-based warnings and statement-based warnings on the components of the PMT.

H_0^2: There is no difference between the influence of physical risks and social risks on the components of the PMT.

H_0^3: There is no difference between the influence of question-based warnings and statement-based warnings as well as physical risks and social risks on the components of the PMT.

H_0^4: There is no difference between the influence of males and females on the components of the PMT.

H_0^5: There is no difference between the influence of males and females as well as question-based warnings and statement-based warnings on the components of the PMT.

H_0^6: There is no difference between the influence of males and females as well as physical risks and social risks on the components of the PMT.

H_{07}: There is no difference between the influence of males and females as well as physical risks and social risks as well as question-based warnings and statement-based warnings on the components of the PMT.

Extended hypotheses:

H_0^{1a}: There is no difference between the influence of question-based warnings and statement-based warnings on perceived vulnerability to a threat.

H_0^{1b}: There is no difference between the influence of question-based warnings and statement-based warnings on perceived severity of a threat.

H_0^{1c}: There is no difference between the influence of question-based warnings and statement-based warnings on perceived fear.

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H_0^{1d}: There is no difference between the influence of question-based warnings and statement-based warnings on perceived response efficacy.

H_0^{1e}: There is no difference between the influence of question-based warnings and statement-based warnings on perceived self-efficacy.

H_0^{1f}: There is no difference between the influence of question-based warnings and statement-based warnings on behavioural intent.

H_0^{2a}: There is no difference between the influence of physical risks and social risks on perceived vulnerability to a threat.

H_0^{2b}: There is no difference between the influence of physical risks and social risks on perceived severity of a threat.

H_0^{2c}: There is no difference between the influence of physical risks and social risks on perceived fear.

H_0^{2d}: There is no difference between the influence of physical risks and social risks on perceived response efficacy.

H_0^{2e}: There is no difference between the influence of physical risks and social risks on perceived self-efficacy.

H_0^{2f}: There is no difference between the influence of physical risks and social risks on behavioural intent.

H_0^{3a}: There is no difference between the influence of question-based warnings and statement-based warnings as well as physical risks and social risks on perceived vulnerability to a threat.

H_0^{3b}: There is no difference between the influence of question-based warnings and statement-based warnings as well as physical risks and social risks on perceived severity of a threat.

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H_0^{3c}: There is no difference between the influence of question-based warnings and statement-based warnings as well as physical risks and social risks on perceived fear.

H_0^{3d}: There is no difference between the influence of question-based warnings and statement-based warnings as well as physical risks and social risks on perceived response efficacy.

H_0^{3e}: There is no difference between the influence of question-based warnings and statement-based warnings as well as physical risks and social risks on perceived self-efficacy.

H_0^{3f}: There is no difference between the influence of question-based warnings and statement-based warnings as well as physical risks and social risks on behavioural intent.

H_0^{4a}: There is no difference between the influence of males and females on perceived vulnerability to a threat.

H_0^{4b}: There is no difference between the influence of males and females on perceived severity of a threat.

H_0^{4c}: There is no difference between the influence of males and females on perceived fear.

H_0^{4d}: There is no difference between the influence of males and females on perceived response efficacy.

H_0^{4e}: There is no difference between the influence of males and females on perceived self-efficacy.

H_0^{4f}: There is no difference between the influence of males and females on behavioural intent.

H_0^{5a}: There is no difference between the influence of males and females as well as question-based warnings and statement-based warnings on perceived vulnerability to a threat.

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H_0^{5b}: There is no difference between the influence of males and females as well as question-based warnings and statement-based warnings on perceived severity of a threat.

H_0^{5c}: There is no difference between the influence of males and females as well as question-based warnings and statement-based warnings on perceived fear.

H_0^{5d}: There is no difference between the influence of males and females as well as question-based warnings and statement-based warnings on perceived response efficacy.

H_0^{5e}: There is no difference between the influence of males and females as well as question-based warnings and statement-based warnings on perceived self-efficacy.

H_0^{5f}: There is no difference between the influence of males and females as well as question-based warnings and statement-based warnings on behavioural intent.

H_0^{6a}: There is no difference between the influence of males and females as well as physical risks and social risks on perceived vulnerability to a threat.

H_0^{6b}: There is no difference between the influence of males and females as well as physical risks and social risks on perceived severity of a threat.

H_0^{6c}: There is no difference between the influence of males and females as well as physical risks and social risks on perceived fear.

H_0^{6d}: There is no difference between the influence of males and females as well as physical risks and social risks on perceived response efficacy.

H_0^{6e}: There is no difference between the influence of males and females as well as physical risks and social risks on perceived self-efficacy.

H_0^{6f}: There is no difference between the influence of males and females as well as physical risks and social risks on behavioural intent.

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H_0^{7a}: There is no difference between the influence of males and females as well as physical risks and social risks as well as question-based warnings and statement-based warnings on perceived vulnerability to a threat.

H_0^{7b}: There is no difference between the influence of males and females as well as physical risks and social risks as well as question-based warnings and statement-based warnings on perceived severity of a threat.

H_0^{7c}: There is no difference between the influence of males and females as well as physical risks and social risks as well as question-based warnings and statement-based warnings on perceived fear.

H_0^{7d}: There is no difference between the influence of males and females as well as physical risks and social risks as well as question-based warnings and statement-based warnings on perceived response efficacy.

H_0^{7e}: There is no difference between the influence of males and females as well as physical risks and social risks as well as question-based warnings and statement-based warnings on perceived self-efficacy.

H_0^{7f}: There is no difference between the influence of males and females as well as physical risks and social risks as well as question-based warnings and statement-based warnings on behavioural intent.

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Appendix B:

Focus Group Discussion Guide

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Discussion Guide (Drinking and Driving)

1. Greeting
   a. Welcome everyone and thank them for their time

   b. Introduction
      - Introduce researcher

   c. Ice breaker
      - There are refreshments if anyone would like anything
      - Are you looking forward to the holidays?

   d. Provide Details of Discussion
      - Provide brief explanation of the purpose of the study
      - Explain what the group will be discussing
      - Highlight that any information that is shared will be kept strictly confidential, however for accuracy's sake, the discussion will be recorded for reference purposes
      - Before we start are there any questions?

2. General Discussion: Drinking and Driving
   a. Introduction
      - If you feel uncomfortable at any time please let me know. I do not want you to feel set under any pressure whatsoever
      - If you are unsure of a question I have asked, please feel free to ask me to clarify

   b. How many of you drink alcohol?

   c. Why do you drink alcohol?
      - Is it the taste? How it makes you feel? Because it's social?
      - So you enjoy the taste?
      - You enjoy how it makes you feel?
      - You enjoy the fact that you are sharing in the activities of those around you?

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- Ok great, tell me more
- Does anyone else feel that way?

d. How often would you say you drink alcohol?
   - List options (every day, 5-6 times… only on special occasions)
   - When you feel like it? Can you say what determines when you feel like it?

e. When you do drink, how much alcohol would you typically consume at one time?
   - What does it depend on?
   - Do you agree?

f. At any point in time, have you ever consumed alcohol and then driven on the same night?
   - When?
   - Why?
   - How often would you say you've done this?
   - How did it make you feel?
     - Scared? Why did you feel scared/nervous/anxious?
     - Did any of you feel at risk? Why?

g. Have you ever been tipsy and then driven?
   - Why?
   - How often?

h. Have you ever been drunk and then driven?
   - I know this is a very sensitive question but I can promise you that all responses will remain anonymous. Everything that is said here, stays here.
   - If you feel uncomfortable answering, you don't have to.

i. Let's talk about some of the consequences of drinking and driving?
   - What are they?
   - Which is most likely to happen?

j. If you were to categorise these consequences into different types of threats, how would you classify them?

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- Physical vs social?

i. What would be the worst consequence for you in terms of drinking and driving?
   - Being in a road accident/physically harmed/arrested/having your license confiscated?
   - So a physical threat is worse for you than a social threat?
   - So a social threat is worse for you than a physical threat?
   - Why?
   - Would you say you place greater emphasis on your physical well-being than your social well-being?
   - Would you say you place greater emphasis on your social well-being than your physical well-being?
   - Would you say your friends opinions play a very important role in what you do?
   - Does anyone else feel that way? Why?

3. Discussion: Types of Fear Appeals
   a. Now I'm quickly going to show you some warnings, some are in the form of statements and others are in the form of questions. I'd like you to look at each warning on its own and indicate on the piece of paper that I handed out to you, whether each warning is either a physical threat or a social threat, and how fearful each warning makes you feel.

(Hand out warnings with questionnaire – let everyone complete the questionnaire)

   b. What did you think about the warnings you saw?
      - Was it easy to classify them according to physical or social threats?
      - Do you think an extra classification category needs to be added?
        - What would you suggest?
      - Which warning did you identify with the most?
        - Why?
        - What aspects of the warning did you identify with?

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c. Within marketing, marketers use what is called a ‘fear appeal’ to try and change consumer behaviour such as smoking and drunk driving. (Example: smoking is bad for your health- show examples). Most fear appeals are in the form of statements, however, recent research indicates that using questions might be a good option to try and change consumer behaviour. (e.g. Smoking causes lung cancer vs What can smoking to do your lungs?).
   - Which type of fear appeal did you respond better to? The questions or the statements?
   - Why?

4. Thank you all so much for attending! I really appreciate your time and honesty. Please help yourself to refreshments and if there are no questions you may leave.

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Appendix C:

Qualitative Measurement Instrument

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Warning 1:

a) How would you classify the warning?

☐ Physical threat

☐ Social threat

b) Please indicate on a scale of 1-10 how fearful the above warning made you feel:

1 2 3 4 5 6 7 8 9 10

Not at all Fearful Very Fearful

Warning 2:

a) How would you classify the warning?

☐ Physical threat

☐ Social threat

b) Please indicate on a scale of 1-10 how fearful the above warning made you feel:

1 2 3 4 5 6 7 8 9 10

Not at all Fearful Very Fearful

Warning 3:

a) How would you classify the warning?

☐ Physical threat

☐ Social threat

b) Please indicate on a scale of 1-10 how fearful the above warning made you feel:

1 2 3 4 5 6 7 8 9 10

Not at all Fearful Very Fearful

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Appendix D:

Fear Appeal Warnings Presented in Focus Groups

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Proposed Physical Risks

Statement-based Warnings

Drinking-and-driving will ruin you

Drinking-and-driving kills

Drinking-and-driving leads to fatal car accidents

Drinking-and-driving leads to serious bodily harm

Drinking-and-driving destroys lives

Drinking-and-driving will leave you in a wheelchair

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How can drinking-and-driving ruin you?

What are the consequences of drinking-and-driving on your life?

How can drinking-and-driving lead to fatal car accidents?

What are the consequences of drinking-and-driving on your physical health?

How does drinking-and-driving destroy lives?

How can drinking-and-driving leave you in a wheelchair?

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Proposed Social Risks

Statement-based Warnings

Drinking-and-driving kills friendships

Don't be a loser: Don't drink-and-drive

Drinking-and-driving steers you towards social rejection

Friends that drink-and-drive together, die together: Don't drink-and-drive

If you drink-and-drive, your friends will see you go to jail

If you drink-and-drive, your friends will see you lose your license

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Question-based Warnings

How can drinking-and-driving kill a friendship?

How does drinking-and-driving make you a loser?

How can drinking-and-driving lead to social rejection?

What are the consequences for your friends' lives if you drink-and-drive?

What will your friends think if you go to jail for drinking-and-driving?

What will your friends think if you lose your license for drinking-and-driving?

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Appendix E:

Stimuli Qualifying Results

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Interpreting the Results:

The results of the qualitative rating scale, for each of the 24 warnings shown in the focus groups, are presented in this Appendix. The following key serves a means for interpreting the results:

Key:

Selected Warning

Unselected Warning

Each of the selected warnings were chosen on the basis of two criteria. Firstly, the warning had to be classified by the majority of the respondents as a specific risk (i.e. physical or social). Respondents' answers in this regard are represented by the 'Threat' column in the following tables. Secondly, the warnings had to possess similar levels of fear to ensure that the comparison between experimental groups was robust. Respondents' answers in this regard are represented by the 'Fear' column in the following tables. Importantly, the 'TOT' column represents the mean level of fear for each of the focus groups, as well as the overall mean level of fear for both groups.

As will be seen, the warnings that emphasised the physical risks of drinking-and-driving, resulted in higher levels of fear for the focus group respondents, ranging from 5.6 to 7.5 out of 10. On the other hand, the warnings that emphasised the social risks of drinking-and-driving resulted in lower levels of fear, ranging from 3.6 to 5.7 out of 10 on average, with two outliers of 6.9 and 7.

Considering that on average, the physical risks evoked higher levels of fear than the social risks, a moderate level of fear was determined as the level according to which the warnings would be selected as stimuli for the experiment.

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Statement Physical Results

Drinking-and-driving will ruin you

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Physical	9	Social	5	
2	Social	6	Social	4	
3	Physical	7	Both	6	
4	Social	7	Both	5	
5	Social	8	Social	10	
6	Both	7	Social	2	
7	Social	7	Social	9	
8	Physical	4	Both	7	
TOT		6.875		6	6.4375

Drinking-and-driving kills

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Physical	10	Physical	10	
2	Physical	2	Physical	6	
3	Physical	6	Physical	6	
4	Physical	6	Physical	4	
5	Physical	10	Physical	10	
6	Physical	7	Physical	4	
7	Social	8	Physical	6	
8	Physical	10	Physical	6	
TOT		7.375		6.5	6.9375

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Drinking-and-driving leads to fatal car accidents

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Physical	9	Physical	9	
2	Physical	6	Physical	9	
3	Physical	8	Physical	6	
4	Physical	8	Both	9	
5	Physical	7	Physical	10	
6	Physical	7	Physical	5	
7	Social	7	Physical	6	
8	Physical	7	Physical	7	
TOT		7.375		7.625	7.5

Drinking-and-driving destroys lives

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Both	10	Social	8	
2	Physical	5	Physical	3	
3	Physical	8	Physical	4	
4	Physical	8	Physical	7	
5	Physical	10	Social	9	
6	Both	7	Both	4	
7	Social	7	Social	7	
8	Physical	6	Physical	8	
TOT		7.625		6.25	6.9375

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Drinking-and-driving will leave you in a wheelchair

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Both	10	Physical	10	
2	Physical	8	Both	7	
3	Physical	8	Both	4	
4	Physical	7	Physical	6	
5	Physical	9	Physical	10	
6	Physical	5	Physical	2	
7	Physical	7	Physical	7	
8	Physical	8	Physical	2	
TOT		7.75		6	6.875

Drinking-and-driving leads to serious bodily harm

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Both	10	Physical	10	
2	Physical	5	Physical	7	
3	Physical	8	Both	6	
4	Physical	7	Physical	6	
5	Physical	10	Physical	8	
6	Physical	6	Physical	1	
7	Physical	6	Physical	5	
8	Physical	6	Physical	6	
TOT		7.25		6.125	6.6875

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Question Physical Results

How can drinking-and-driving ruin you?

	Males		Females		
	Threat	Fear	Threat	Fear	
1	-	-	Social	3	
2	Social	9	Both	4	
3	Social	7	Both	5	
4	Both	7	Both	5	
5	Social	9	Social	10	
6	Both	4	Social	3	
7	Social	4	Social	7	
8	Physical	4	Both	3	
TOT		6.2857		5	5.64285

What are the consequences of drinking-and-driving on your life?

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Physical	-	Physical	8	
2	Social	8	Both	2	
3	Physical	7	Physical	2	
4	Physical	8	Physical	2	
5	Physical	10	Both	10	
6	Social	4	Physical	3	
7	Physical	5	Both	6	
8	Physical	7	Physical	4	
TOT		7		4.625	5.8125

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How can drinking-and-driving lead to fatal car accidents?

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Social	8	Physical	7	
2	Physical	7	Physical	3	
3	Physical	7	Physical	4	
4	Physical	8	Both	8	
5	Physical	7	Physical	10	
6	Physical	4	Physical	3	
7	Social	3	Physical	4	
8	Physical	7	Physical	6	
TOT		6.375		5.625	6

How does drinking-and-driving destroy lives?

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Physical	9	Social	6	
2	Social	7	Physical	3	
3	Physical	7	Physical	4	
4	Physical	8	Physical	6	
5	Physical	9	Both	8	
6	Both	4	Both	2	
7	Social	6	Social	6	
8	Physical	6	Physical	7	
TOT		7		5.25	6.125

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How can drinking-and-driving leave you in a wheelchair?

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Physical	6	Physical	8	
2	Physical	8	Physical	4	
3	Physical	5	Physical	4	
4	Physical	8	Physical	6	
5	Physical	7	Physical	10	
6	Physical	3	Physical	3	
7	Physical	4	Physical	6	
8	Physical	8	Physical	7	
TOT		6.125		6	6.0625

What are the consequences of drinking-and-driving on your physical health?

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Physical	9	Physical	7	
2	Physical	6	Physical	3	
3	Physical	8	Physical	4	
4	Physical	6	Physical	4	
5	Physical	10	Physical	8	
6	Physical	4	Physical	4	
7	Physical	6	Physical	3	
8	Physical	6	Physical	5	
TOT		6.875		4.75	5.8125

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Statement Social Results

Drinking-and-driving kills friendships

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Social	10	Social	2	
2	Social	7	Social	3	
3	Social	8	Social	3	
4	Both	7	Social	5	
5	Social	2	Social	4	
6	Both	7	Social	1	
7	Social	5	Social	6	
8	Social	3	Social	4	
TOT		6.125		3.5	4.8125

Don't be a loser: Don't drink-and-drive

	Males		Females		
	Threat	Fear	Threat	Fear	
1	-	-	Social	3	
2	Social	3	Social	2	
3	Social	8	Social	4	
4	Social	6	Social	4	
5	Social	4	Both	6	
6	Social	3	Social	4	
7	Social	5	Social	3	
8	Social	1	Social	2	
TOT		4.2857		3.5	3.89285

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Drinking-and-driving steers you towards social rejection

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Social	9	Social	1	
2	Social	3	Social	3	
3	Social	6	Both	5	
4	Social	5	Social	3	
5	Social	5	Social	8	
6	Social	5	Social	2	
7	Social	5	Social	6	
8	Social	1	Social	2	
TOT		4.875		3.75	4.3125

Friends that drink-and-drive together, die together: Don't drink-and-drive

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Social	8	Physical	6	
2	Physical	8	Physical	6	
3	Physical	8	Physical	4	
4	Physical	7	Both	4	
5	Physical	7	Physical	8	
6	Both	5	Social	6	
7	Physical	7	Physical	9	
8	Physical	9	Both	9	
TOT		7.375		6.5	6.9375

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If you drink-and-drive, your friends will see you go to jail

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Social	8	Social	1	
2	Social	9	Social	8	
3	Social	9	Social	3	
4	Social	6	Social	4	
5	Social	8	Social	10	
6	Social	7	Social	1	
7	Social	6	Social	6	
8	Social	4	Social	2	
TOT		7.125		4.375	5.75

If you drink-and-drive, your friends will see you lose your license

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Social	9	Social	2	
2	Social	8	Social	8	
3	Social	8	Social	5	
4	Social	5	Social	3	
5	Social	3	Social	9	
6	Social	7	Social	2	
7	Social	4	Social	8	
8	Social	1	Social	1	
TOT		5.625		4.75	5.1875

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Question Social Results

How can drinking-and-driving kill a friendship?

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Social	9	Social	3	
2	Social	8	Social	4	
3	Social	8	Social	3	
4	Social	6	Social	5	
5	Social	4	Social	5	
6	Both	4	Social	3	
7	Social	2	Social	4	
8	Social	3	Both	8	
TOT		5.5		4.375	4.9375

How does drinking-and-driving make you a loser?

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Social	8	Social	3	
2	Social	4	Social	2	
3	Social	6	Social	3	
4	Social	7	Social	2	
5	Social	7	Social	5	
6	Social	3	Social	1	
7	Social	2	Social	2	
8	Social	1	Social	2	
TOT		4.75		2.5	3.625

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How can drinking-and-driving lead to social rejection?

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Social	8	Social	1	
2	Social	4	Social	2	
3	Social	6	Social	5	
4	Social	5	Social	3	
5	Social	8	Social	7	
6	Social	4	Social	2	
7	Social	2	Social	4	
8	Social	1	Social	2	
TOT		4.75		3.25	4

What are the consequences for your friends' lives if you drink-and-drive?

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Social	10	Physical	10	
2	Physical	10	Physical	6	
3	Physical	8	Both	6	
4	Physical	7	Social	7	
5	Social	6	Both	10	
6	Social	3	Social	2	
7	Social	4	Physical	8	
8	Physical	9	Physical	6	
TOT		7.125		6.875	7

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What will your friends think if you go to jail for drinking-and-driving?

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Social	10	Social	1	
2	Social	7	Social	8	
3	Social	9	Both	5	
4	Social	6	Social	3	
5	Social	7	Social	9	
6	Social	4	Social	2	
7	Social	6	Social	6	
8	Social	4	Social	3	
TOT		6.625		4.625	5.625

What will your friends think if you lose your license for drinking-and-driving?

	Males		Females		
	Threat	Fear	Threat	Fear	
1	Social	7	Social	3	
2	Social	8	Social	7	
3	Social	7	Social	5	
4	Social	6	Social	1	
5	Social	2	Social	9	
6	Social	4	Social	4	
7	Social	3	Social	6	
8	Social	1	Social	2	
TOT		4.75		4.625	4.6875

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Appendix F:

Finalised Measurement Instrument

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*Good day!

Thank you for taking the time to fill out this questionnaire, which forms part of Stephanie Bührer's MCom thesis: The influence of fear appeal approaches and perceived risk on protection motivation. This questionnaire is being conducted in order to investigate how consumers respond to different types of messages in terms of drinking-and-driving.

You will be asked a few questions relating to your opinion about drinking-and-driving. It takes 10 minutes to complete and the information is purely for academic purposes. Any information that is obtained in connection with this study will remain **confidential** and will be disclosed *only* with your *permission*.

Participation with this questionnaire is entirely **voluntary**. Should you feel uncomfortable at any time, you may stop. However, your participation is greatly appreciated. Should you have any queries, please feel free to contact the researcher, Stephanie Bührer, at stephaniebuehrer@gmail.com.

If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development. You have right to receive a copy of the Information and Consent form.

After reading this information, if you would like to participate in this study, please indicate 'YES' below:

- YES
- NO

Next

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Please read the following information carefully:

The legal blood alcohol **limit** in South Africa is **less** than **0.05g** per **100ml**.

For this study, **drinking-and-driving** will be classified as being **over the legal limit**: **more than** 0.05g per 100ml.

Consuming one of the following will put you over the legal limit:

- 1 glass of red wine (150 ml)
- 1.25 glasses of white wine (180ml)
- 1 spirit cooler (330ml) – e.g. Smirnoff, Red Square, Brutal Fruit etc.
- 1 can of beer (330ml)
- 1 cider (330ml) – e.g. Savanna, Hunters etc.
- 1 tot of spirits (25ml) – e.g. Whisky, Brandy, Vodka etc.
- 1 shot/shooter (25ml)

NB! Please answer the following questions with the above alcohol quantities in mind.

Next

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Section A:

Please answer the following questions to the best of your ability. There are no right or wrong answers.

Please select the answer that is most appropriate.

ALL answers are **confidential** and will remain **anonymous**.

---

*Gender

Select:

*Race

Select:

*Age

*Do you have a valid driver's license?

YES NO

*Have you consumed an alcoholic beverage in the last month?

YES NO

*Have you been involved in a road accident due to drinking-and-driving?

YES NO

*Do you know someone who has been involved in a road accident due to drinking-and-driving?

YES NO

*Do you wish to continue with this questionnaire?

YES

Next

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Section B:

Please answer the following questions to the best of your ability. There are no right or wrong answers.

Please select the answer that is most appropriate.

ALL answers are **confidential** and will remain **anonymous**.

---

*What is your disposable income per month?

R

*How much do you spend on alcohol per month?

R

*How often do you drink alcohol?

Select:

Next

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Section C:

Please answer the following questions to the best of your ability. There are no right or wrong answers.

Please select the answer that is most appropriate.

ALL answers are **confidential** and will remain **anonymous**.

---

*When was the last party/bar/social gathering you attended?

*Please indicate the types of drinks that were consumed

- [ ] Beer
- [ ] White wine
- [ ] Shooters
- [ ] Cider
- [ ] Red wine
- [ ] Cocktails
- [ ] Spirit cooler
- [ ] Spirits
- [ ] Other:

*How much alcohol did you consume at this event?

drinks

*How did you get home from the event?

- ( ) Taxi
- ( ) Sober friend
- ( ) I drove myself
- ( ) I walked
- ( ) Friend who had been drinking
- ( ) Other:

Next

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Section D:

Please answer the following questions to the best of your ability. There are no right or wrong answers.

Please select the answer that is most appropriate.

ALL answers are **confidential** and will remain **anonymous**.

***I have driven in the past 3 months while being over the blood alcohol limit**

YES NO

*I have driven in the past 3 months while intoxicated

YES NO

*I have received a warning before for drinking-and-driving

YES NO

*I have been arrested before for drinking-and-driving

YES NO

Next

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Page 7

Please pay **close** attention to the following warning.

Next

Page 8

NB! Please keep this warning in mind when answering the remaining questions

Next

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Section E:

Please answer the following questions to the best of your ability. There are no right or wrong answers.

Please select the answer that is most appropriate.

ALL answers are **confidential** and will remain **anonymous**.

---

*Rate your response on a scale of Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Engaging in drinking-and-driving makes me vulnerable to risk	○	○	○	○	○
I am at risk if I drive when over the alcohol limit	○	○	○	○	○
Engaging in drinking-and-driving puts me at risk	○	○	○	○	○
Driving while intoxicated puts me at risk	○	○	○	○	○

*Rate your response on a scale of Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Drinking-and-driving is a main factor in causing negative consequences	○	○	○	○	○
Drinking-and-driving is an extremely severe threat	○	○	○	○	○
Drinking-and-driving has serious negative consequences	○	○	○	○	○
Drinking-and-driving has the potential to cause severe damage	○	○	○	○	○

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*Rate your response on a scale of Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Taking a taxi home after drinking will prevent serious negative consequences					
It is important to not drink-and-drive					
Not drinking-and-driving will decrease the chance of suffering from a severe threat					
Having a sober friend drive will prevent negative drinking-and-driving consequences from occurring					

*Rate your response on a scale of Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Not drinking-and-driving will be better for me					
I can avoid drinking-and-driving by letting my sober friend drive after I've been drinking					
I can effectively avoid drinking-and-driving					
I can avoid drinking-and-driving by calling a taxi to drive myself home after I've been drinking					

Next

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Section F:

Please answer the following questions to the best of your ability. There are no right or wrong answers.

Please select the answer that is most appropriate.

ALL answers are **confidential** and will remain **anonymous**.

---

*Rate your response on a scale of Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The warning made me feel uncomfortable	○	○	○	○	○
The warning made me feel tense	○	○	○	○	○
The warning made me feel fearful	○	○	○	○	○
The warning made me feel nervous	○	○	○	○	○
The warning made me feel anxious	○	○	○	○	○
The warning made me feel scared	○	○	○	○	○

Next

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Section G:

Please answer the following questions to the best of your ability. There are no right or wrong answers.

Please select the answer that is most appropriate.

ALL answers are **confidential** and will remain **anonymous**.

---

*Rate your response on a scale of Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I will not consume alcohol and then drive	○	○	○	○	○
This warning makes me want to drink-and-drive less	○	○	○	○	○
I intend to stop drinking-and-driving	○	○	○	○	○
In the next two weeks I will encourage a friend to stop drinking-and-driving	○	○	○	○	○
This warning has deterred me from drinking-and-driving	○	○	○	○	○
I will consider drinking-and-driving less	○	○	○	○	○

Next

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Section H:

Please answer the following questions to the best of your ability. There are no right or wrong answers.

Please select the answer that is most appropriate.

ALL answers are **confidential** and will remain **anonymous**.

---

*Safety first.

Totally Disagree								Totally Agree
○ 1	○ 2	○ 3	○ 4	○ 5	○ 6	○ 7	○ 8	○ 9

*I do not take risks with my health.

Totally Disagree								Totally Agree
○ 1	○ 2	○ 3	○ 4	○ 5	○ 6	○ 7	○ 8	○ 9

*I prefer to avoid risks.

Totally Disagree								Totally Agree
○ 1	○ 2	○ 3	○ 4	○ 5	○ 6	○ 7	○ 8	○ 9

*I take risks regularly.

Totally Disagree								Totally Agree
○ 1	○ 2	○ 3	○ 4	○ 5	○ 6	○ 7	○ 8	○ 9

*I really dislike not knowing what is going to happen.

Totally Disagree								Totally Agree
○ 1	○ 2	○ 3	○ 4	○ 5	○ 6	○ 7	○ 8	○ 9

*I usually view risks as a challenge.

Totally Disagree								Totally Agree
○ 1	○ 2	○ 3	○ 4	○ 5	○ 6	○ 7	○ 8	○ 9

*I view myself as a...

Risk Avoider								Risk Seeker
○ 1	○ 2	○ 3	○ 4	○ 5	○ 6	○ 7	○ 8	○ 9

Finish

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You have reached the end of this questionnaire.

Thank you for your time.

If you would like to talk to someone about the image you've seen, please contact the SU counselling centre:

Office Hours: 021 808 4994
24 Hour Line: 082 557 0880

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Appendix G:

Additional Results Data

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Reliability Statistics

Statement (Physical)

Reliability Statistics

Cronbach's Alpha	N of Items
.911	28

Question (Physical)

Reliability Statistics

Cronbach's Alpha	N of Items
.893	28

Statement (Social)

Reliability Statistics

Cronbach's Alpha	N of Items
.899	28

Question (Social)

Reliability Statistics

Cronbach's Alpha	N of Items
.909	28

Additional Inferential Data per PMT Component

Label Interpretations:

- "Phys" = physical risk
- "Soc" = social risk
- "Stat" = statement-based warning
- "Quest" = question-based warning

1. Vulnerability:

Table G1.1: Vulnerability Tests of Significance

Effect	Univariate Tests of Significance for vulnerability Effective hypothesis decomposition; Std. Error of Estimate: 0.5519 SS	Degr. of Freedom	MS	F	p
Intercept	24301.30	1	24301.30	79780.41	0.000000
phys/soc	0.56	1	0.56	1.85	0.173659
stat/quest	0.01	1	0.01	0.02	0.880549
Gender	20.15	1	20.15	66.14	0.000000
phys/soc*stat/quest	0.17	1	0.17	0.56	0.455125
phys/soc*Gender	0.28	1	0.28	0.92	0.336547
stat/quest*Gender	1.05	1	1.05	3.46	0.063256
phys/soc*stat/quest*Gender	0.20	1	0.20	0.66	0.415734
Error	364.00	1195	0.30		

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2. Severity

Table G2.1: Severity Tests of Significance

Effect	Univariate Tests of Significance for Severity Effective hypothesis decomposition; Std. Error of Estimate: 0.5797 SS	Degr. of Freedom	MS	F	p
Intercept	22737.14	1	22737.14	67663.46	0.000000
phys/soc	2.54	1	2.54	7.55	0.006084
stat/quest	0.03	1	0.03	0.09	0.769771
Gender	13.48	1	13.48	40.13	0.000000
phys/soc*stat/quest	0.00	1	0.00	0.00	1.000000
phys/soc*Gender	1.03	1	1.03	3.05	0.080773
stat/quest*Gender	0.41	1	0.41	1.23	0.267516
phys/soc*stat/quest*Gender	1.08	1	1.08	3.21	0.073473
Error	401.56	1195	0.34		

Table G2.2: Gender Main Effects for Severity

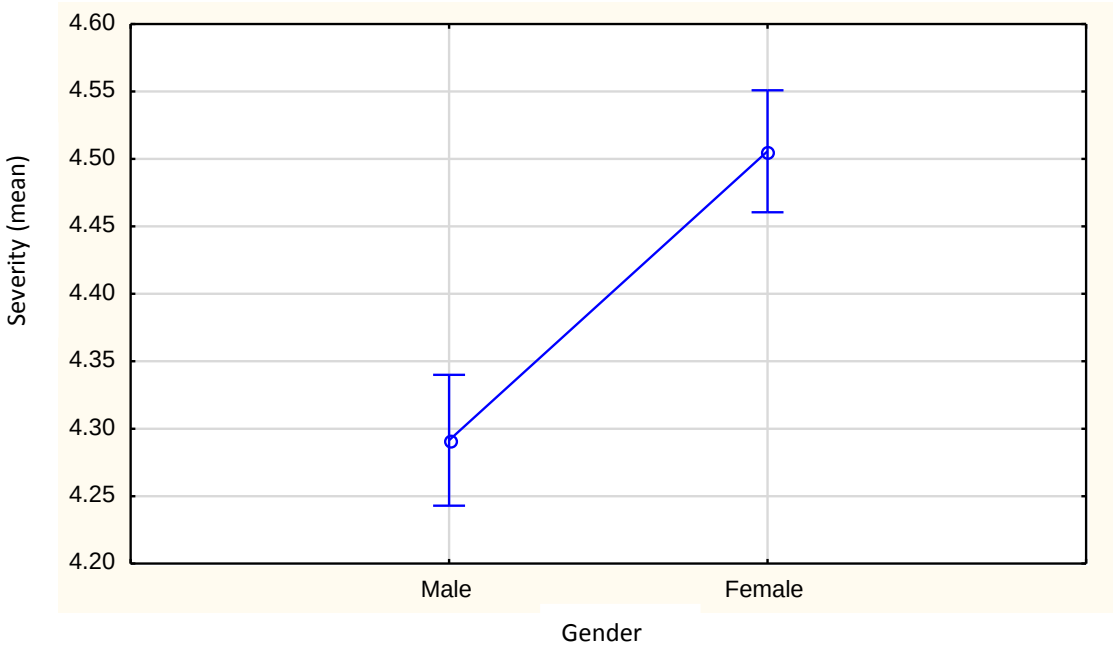

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Table G2.3: Physical and Social Risk Main Effects for Severity

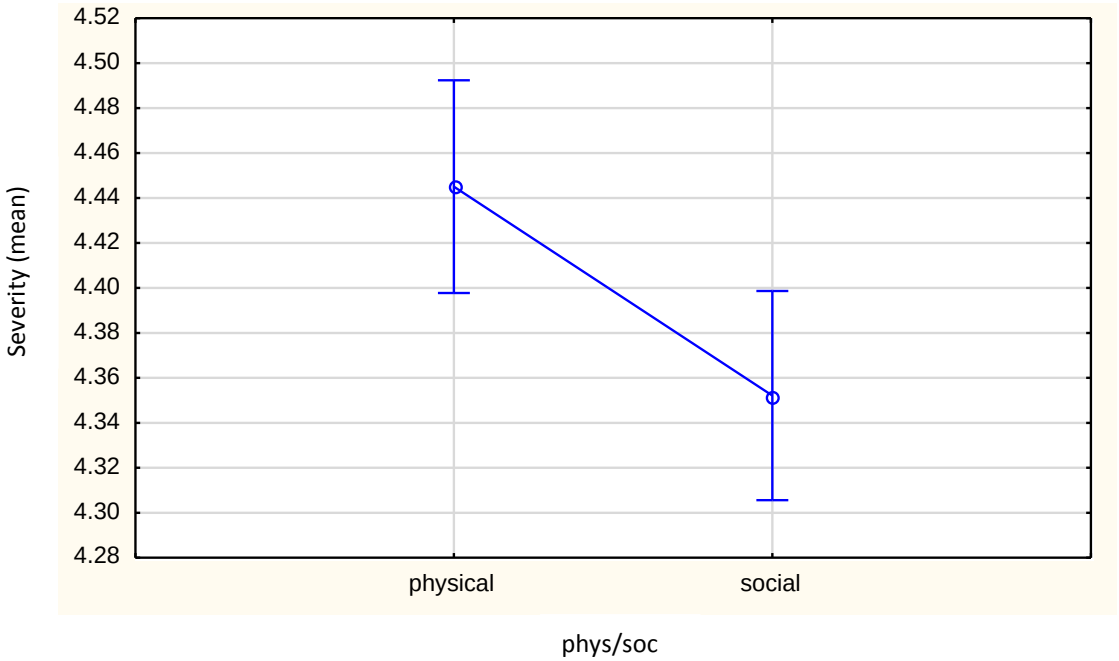

Table G2.4: Three-way Interaction for Severity (Question- versus Statement-based Warnings and Physical versus Social Risk and Gender Differences for Severity)

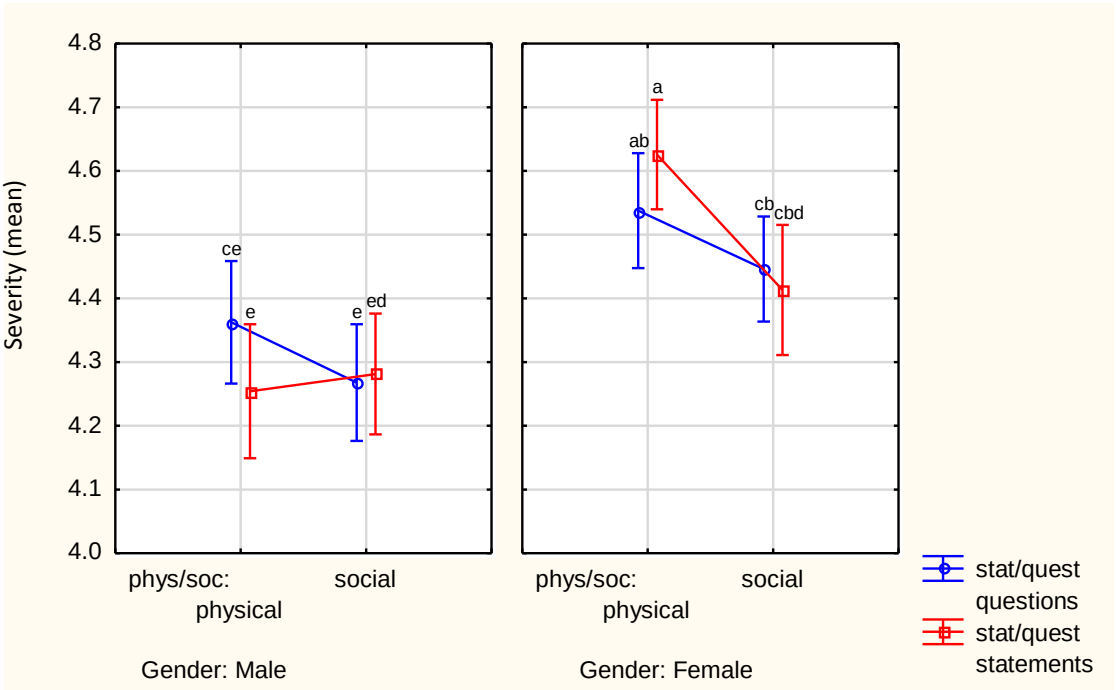

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Table G2.5: LSD Post Hoc Analysis for Three-way Interaction for Severity

Cell	LSD test; variable Severity Probabilities for Post Hoc Tests Error: Between MSE = .33603, df = 1195.0									
	phys/soc	stat/quest	Gender	{1} 4.3625	{2} 4.5377	{3} 4.2543	{4} 4.6257	{5} 4.2679	{6} 4.4461	{7} 4.2813	{8} 4.4133
1	physical	questions	Male		0.009213	0.136356	0.000066	0.162333	0.195896	0.237871	0.477394
2	physical	questions	Female	0.009213		0.000063	0.166233	0.000041	0.141418	0.000126	0.073445
3	physical	statements	Male	0.136356	0.000063		0.000000	0.848503	0.004955	0.708549	0.033492
4	physical	statements	Female	0.000066	0.166233	0.000000		0.000000	0.003156	0.000000	0.001842
5	social	questions	Male	0.162333	0.000041	0.848503	0.000000		0.004659	0.842059	0.037779
6	social	questions	Female	0.195896	0.141418	0.004955	0.003156	0.004659		0.010199	0.624705
7	social	statements	Male	0.237871	0.000126	0.708549	0.000000	0.842059	0.010199		0.063204
8	social	statements	Female	0.477394	0.073445	0.033492	0.001842	0.037779	0.624705	0.063204	

Table G2.6: Descriptive Statistics for Severity

Effect	Descriptive Statistics Level of Factor	Level of Factor	Level of Factor	N	severity Mean	severity Std.Dev.	severity Std.Err
Total				1203	4.410017	0.591957	0.017067
phys/soc	physical			591	4.466159	0.573161	0.023577
phys/soc	social			612	4.355801	0.605096	0.024460
stat/quest	questions			643	4.407854	0.583860	0.023025
stat/quest	statements			560	4.412500	0.601634	0.025424
Gender	Male			555	4.292342	0.624240	0.026497
Gender	Female			648	4.510802	0.543401	0.021347
phys/soc*stat/quest	physical	questions		299	4.455686	0.550626	0.031844
phys/soc*stat/quest	physical	statements		292	4.476884	0.596111	0.034885
phys/soc*stat/quest	social	questions		344	4.366279	0.609028	0.032837
phys/soc*stat/quest	social	statements		268	4.342351	0.600879	0.036705
phys/soc*Gender	physical	Male		257	4.313230	0.630941	0.039357
phys/soc*Gender	physical	Female		334	4.583832	0.494042	0.027033
phys/soc*Gender	social	Male		298	4.274329	0.618897	0.035852
phys/soc*Gender	social	Female		314	4.433121	0.582206	0.032856
stat/quest*Gender	questions	Male		294	4.312925	0.610519	0.035606
stat/quest*Gender	questions	Female		349	4.487822	0.548668	0.029370
stat/quest*Gender	statements	Male		261	4.269157	0.639724	0.039598
stat/quest*Gender	statements	Female		299	4.537625	0.536860	0.031047
phys/soc*stat/quest*Gender	physical	questions	Male	140	4.362500	0.585592	0.049492
phys/soc*stat/quest*Gender	physical	questions	Female	159	4.537736	0.505655	0.040101
phys/soc*stat/quest*Gender	physical	statements	Male	117	4.254274	0.679109	0.062784
phys/soc*stat/quest*Gender	physical	statements	Female	175	4.625714	0.480865	0.036350
phys/soc*stat/quest*Gender	social	questions	Male	154	4.267857	0.630843	0.050835
phys/soc*stat/quest*Gender	social	questions	Female	190	4.446053	0.580251	0.042096
phys/soc*stat/quest*Gender	social	statements	Male	144	4.281250	0.607985	0.050665
phys/soc*stat/quest*Gender	social	statements	Female	124	4.413306	0.586990	0.052713

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3. Fear

Table G3.1: Fear Tests of Significance

Effect	Univariate Tests of Significance for Fear Effective hypothesis decomposition; Std. Error of Estimate: 0.9232 SS	Degr. of Freedom	MS	F	p
Intercept	8159.077	1	8159.077	9572.376	0.000000
phys/soc	12.979	1	12.979	15.227	0.000101
stat/quest	0.619	1	0.619	0.726	0.394422
Gender	0.873	1	0.873	1.024	0.311811
phys/soc*stat/quest	0.126	1	0.126	0.148	0.700378
phys/soc*Gender	0.022	1	0.022	0.026	0.871138
stat/quest*Gender	2.075	1	2.075	2.434	0.118993
phys/soc*stat/quest*Gender	0.592	1	0.592	0.695	0.404690
Error	1018.566	1195	0.852		

Table G3.2: Physical and Social Risk Main Effects for Fear

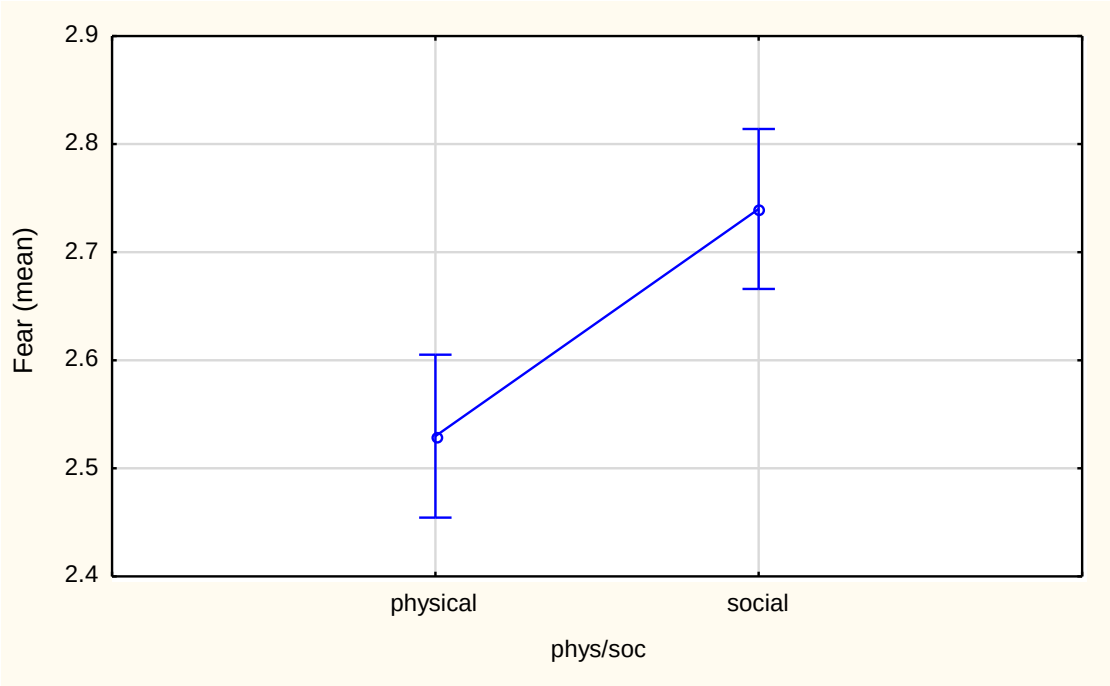

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Table G3.3: Descriptive Statistics for Fear

Effect	Descriptive Statistics						
	Level of Factor	Level of Factor	Level of Factor	N	fear Mean	fear Std.Dev.	fear Std.Err
Total				1203	2.638820	0.928053	0.026757
phys/soc	physical			591	2.536661	0.903733	0.037175
phys/soc	social			612	2.737473	0.941205	0.038046
stat/quest	questions			643	2.619492	0.930393	0.036691
stat/quest	statements			560	2.661012	0.925692	0.039118
Gender	Male			555	2.616517	0.885400	0.037583
Gender	Female			648	2.657922	0.963355	0.037844
phys/soc*stat/quest	physical	questions		299	2.493868	0.915247	0.052930
phys/soc*stat/quest	physical	statements		292	2.580479	0.891226	0.052155
phys/soc*stat/quest	social	questions		344	2.728682	0.930983	0.050195
phys/soc*stat/quest	social	statements		268	2.748756	0.955795	0.058384
phys/soc*Gender	physical	Male		257	2.509728	0.872026	0.054396
phys/soc*Gender	physical	Female		334	2.557385	0.928159	0.050787
phys/soc*Gender	social	Male		298	2.708613	0.887948	0.051437
phys/soc*Gender	social	Female		314	2.764862	0.989742	0.055854
stat/quest*Gender	questions	Male		294	2.630952	0.890981	0.051963
stat/quest*Gender	questions	Female		349	2.609838	0.963512	0.051576
stat/quest*Gender	statements	Male		261	2.600255	0.880496	0.054501
stat/quest*Gender	statements	Female		299	2.714047	0.961742	0.055619
phys/soc*stat/quest*Gender	physical	questions	Male	140	2.538095	0.908997	0.076824
phys/soc*stat/quest*Gender	physical	questions	Female	159	2.454927	0.921818	0.073105
phys/soc*stat/quest*Gender	physical	statements	Male	117	2.475783	0.828221	0.076569
phys/soc*stat/quest*Gender	physical	statements	Female	175	2.650476	0.926700	0.070052
phys/soc*stat/quest*Gender	social	questions	Male	154	2.715368	0.868626	0.069996
phys/soc*stat/quest*Gender	social	questions	Female	190	2.739474	0.980763	0.071152
phys/soc*stat/quest*Gender	social	statements	Male	144	2.701389	0.911140	0.075928
phys/soc*stat/quest*Gender	social	statements	Female	124	2.803763	1.006090	0.090350

4. Response Efficacy

Table G4.1: Response Efficacy Tests of Significance

Effect	Univariate Tests of Significance for response efficacy Effective hypothesis decomposition; Std. Error of Estimate: 0.6413				
	SS	Degr. of Freedom	MS	F	p
Intercept	21349.86	1	21349.86	51917.81	0.000000
phys/soc	0.27	1	0.27	0.64	0.422262
stat/quest	0.01	1	0.01	0.03	0.860927
Gender	5.00	1	5.00	12.15	0.000508
phys/soc*stat/quest	0.49	1	0.49	1.18	0.276994
phys/soc*Gender	0.09	1	0.09	0.21	0.646023
stat/quest*Gender	0.02	1	0.02	0.04	0.837061
phys/soc*stat/quest*Gender	0.13	1	0.13	0.32	0.569201
Error	491.41	1195	0.41		

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Table G4.2: Gender Main Effects for Response Efficacy

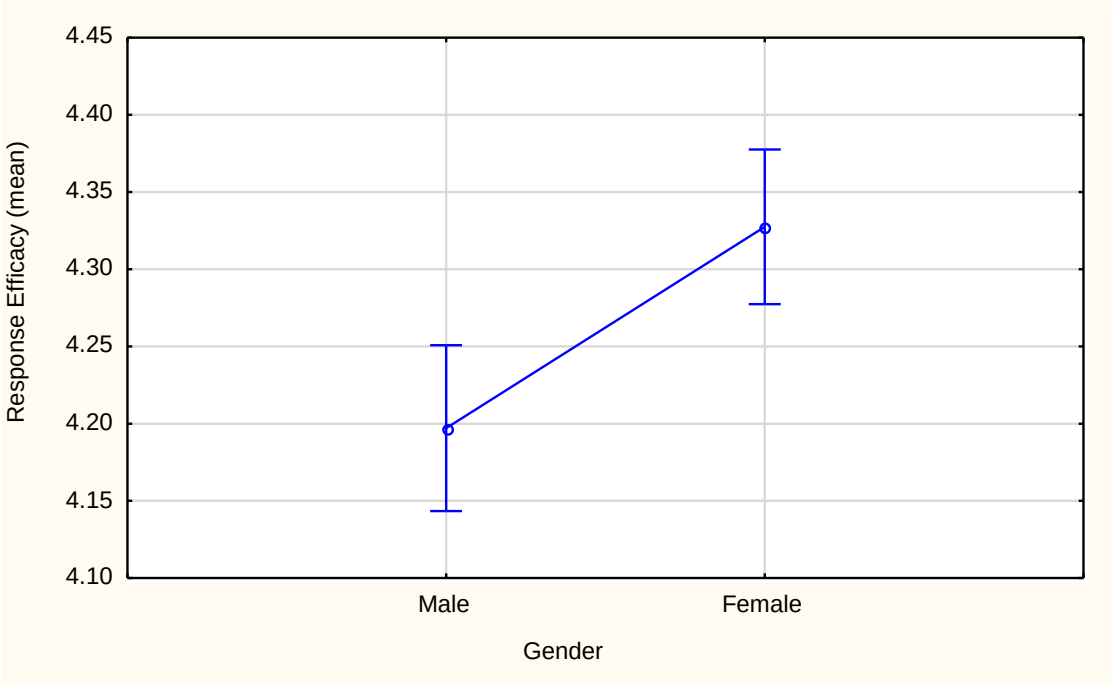

Table G4.3: Descriptive Statistics for Response Efficacy

Effect	Descriptive Statistics						
	Level of Factor	Level of Factor	Level of Factor	N	response efficacy Mean	response efficacy Std.Dev.	response efficacy Std.Err
Total				1203	4.267456	0.643351	0.018549
phys/soc	physical			591	4.287648	0.639418	0.026302
phys/soc	social			612	4.247958	0.647050	0.026155
stat/quest	questions			643	4.269051	0.638313	0.025173
stat/quest	statements			560	4.265625	0.649654	0.027453
Gender	Male			555	4.197297	0.622996	0.026445
Gender	Female			648	4.327546	0.654807	0.025723
phys/soc*stat/quest	physical	questions		299	4.305184	0.604692	0.034970
phys/soc*stat/quest	physical	statements		292	4.269692	0.673694	0.039425
phys/soc*stat/quest	social	questions		344	4.237645	0.665442	0.035878
phys/soc*stat/quest	social	statements		268	4.261194	0.623634	0.038094
phys/soc*Gender	physical	Male		257	4.206226	0.624046	0.038927
phys/soc*Gender	physical	Female		334	4.350299	0.644950	0.035290
phys/soc*Gender	social	Male		298	4.189597	0.623036	0.036092
phys/soc*Gender	social	Female		314	4.303344	0.665306	0.037545
stat/quest*Gender	questions	Male		294	4.194728	0.632697	0.036900
stat/quest*Gender	questions	Female		349	4.331662	0.637203	0.034109
stat/quest*Gender	statements	Male		261	4.200192	0.613086	0.037949
stat/quest*Gender	statements	Female		299	4.322742	0.675818	0.039084
phys/soc*stat/quest*Gender	physical	questions	Male	140	4.233929	0.597665	0.050512
phys/soc*stat/quest*Gender	physical	questions	Female	159	4.367925	0.605755	0.048040
phys/soc*stat/quest*Gender	physical	statements	Male	117	4.173077	0.655268	0.060580
phys/soc*stat/quest*Gender	physical	statements	Female	175	4.334286	0.679944	0.051399
phys/soc*stat/quest*Gender	social	questions	Male	154	4.159091	0.662868	0.053415
phys/soc*stat/quest*Gender	social	questions	Female	190	4.301316	0.662436	0.048058
phys/soc*stat/quest*Gender	social	statements	Male	144	4.222222	0.577939	0.048162
phys/soc*stat/quest*Gender	social	statements	Female	124	4.306452	0.672363	0.060380

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5. Self-efficacy

Table G5.1: Self-efficacy Tests of Significance

Effect	Univariate Tests of Significance for Self-efficacy Effective hypothesis decomposition; Std. Error of Estimate: 0.6934 SS	Degr. of Freedom	MS	F	p
Intercept	21287.21	1	21287.21	44271.62	0.000000
phys/soc	2.33	1	2.33	4.85	0.027878
stat/quest	1.20	1	1.20	2.50	0.114288
Gender	25.91	1	25.91	53.88	0.000000
phys/soc*stat/quest	0.00	1	0.00	0.00	0.978460
phys/soc*Gender	0.27	1	0.27	0.57	0.450022
stat/quest*Gender	1.93	1	1.93	4.02	0.045147
phys/soc*stat/quest*Gender	0.32	1	0.32	0.67	0.413380
Error	574.59	1195	0.48		

Table G5.2: Physical and Social Risk Main Effects for Self-efficacy

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Table G5.3: Two-way Interaction for Self-efficacy (Question- versus Statement-based Warnings and Gender Differences for Self-efficacy)

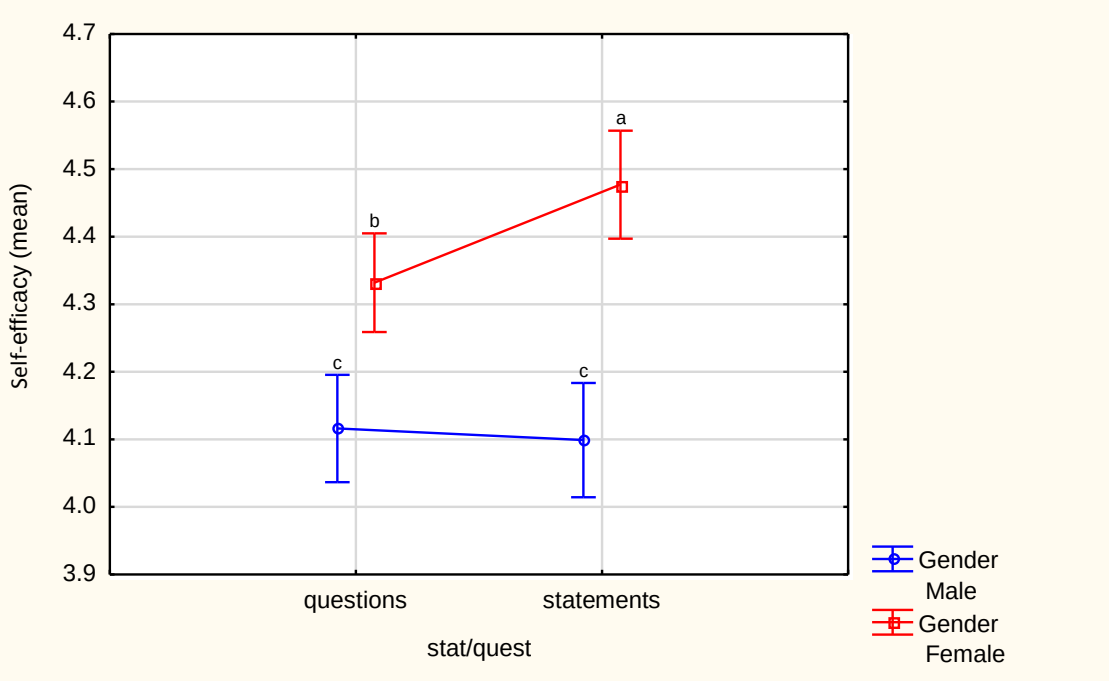

Table G5.4: LSD Post Hoc Analysis for Two-way Interaction for Self-efficacy

Cell	LSD test; variable Self-efficacy Probabilities for Post Hoc Tests Error: Between MSE = .48083, df = 1195.0 stat/quest	Gender	{1} 4.1139	{2} 4.3281	{3} 4.0977	{4} 4.4900
1	questions	Male		0.000101	0.783012	0.000000
2	questions	Female	0.000101		0.000052	0.003111
3	statements	Male	0.783012	0.000052		0.000000
4	statements	Female	0.000000	0.003111	0.000000	

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Table G5.5: Descriptive Statistics for Self-efficacy

Effect	Descriptive Statistics						
	Level of Factor	Level of Factor	Level of Factor	N	self-efficacy Mean	self-efficacy Std.Dev.	self-efficacy Std.Err
Total				1203	4.266002	0.711289	0.020508
phys/soc	physical			591	4.325296	0.699908	0.028790
phys/soc	social			612	4.208742	0.718041	0.029025
stat/quest	questions			643	4.230171	0.707448	0.027899
stat/quest	statements			560	4.307143	0.714088	0.030176
Gender	Male			555	4.106306	0.722702	0.030677
Gender	Female			648	4.402778	0.672374	0.026413
phys/soc*stat/quest	physical	questions		299	4.275920	0.690872	0.039954
phys/soc*stat/quest	physical	statements		292	4.375856	0.706651	0.041354
phys/soc*stat/quest	social	questions		344	4.190407	0.720187	0.038830
phys/soc*stat/quest	social	statements		268	4.232276	0.715932	0.043733
phys/soc*Gender	physical	Male		257	4.139105	0.743696	0.046390
phys/soc*Gender	physical	Female		334	4.468563	0.628812	0.034407
phys/soc*Gender	social	Male		298	4.078020	0.704121	0.040789
phys/soc*Gender	social	Female		314	4.332803	0.710144	0.040076
stat/quest*Gender	questions	Male		294	4.113946	0.714448	0.041667
stat/quest*Gender	questions	Female		349	4.328080	0.687396	0.036795
stat/quest*Gender	statements	Male		261	4.097701	0.733167	0.045382
stat/quest*Gender	statements	Female		299	4.489967	0.644660	0.037282
phys/soc*stat/quest*Gender	physical	questions	Male	140	4.162500	0.725886	0.061349
phys/soc*stat/quest*Gender	physical	questions	Female	159	4.375786	0.644398	0.051104
phys/soc*stat/quest*Gender	physical	statements	Male	117	4.111111	0.766657	0.070877
phys/soc*stat/quest*Gender	physical	statements	Female	175	4.552857	0.603860	0.045648
phys/soc*stat/quest*Gender	social	questions	Male	154	4.069805	0.703340	0.056677
phys/soc*stat/quest*Gender	social	questions	Female	190	4.288158	0.720673	0.052283
phys/soc*stat/quest*Gender	social	statements	Male	144	4.086806	0.707304	0.058942
phys/soc*stat/quest*Gender	social	statements	Female	124	4.401210	0.690983	0.062052

6. Behavioural Intent

Table G6.1: Behavioural Intent Tests of Significance

Effect	Univariate Tests of Significance for Behavioural Intent Effective hypothesis decomposition; Std. Error of Estimate: 0.7375				
	SS	Degr. of Freedom	MS	F	p
Intercept	13986.40	1	13986.40	25714.10	0.000000
phys/soc	1.57	1	1.57	2.88	0.089866
stat/quest	1.48	1	1.48	2.73	0.098838
Gender	37.36	1	37.36	68.69	0.000000
phys/soc*stat/quest	1.41	1	1.41	2.59	0.108128
phys/soc*Gender	0.05	1	0.05	0.08	0.772170
stat/quest*Gender	7.40	1	7.40	13.61	0.000235
phys/soc*stat/quest*Gender	0.00	1	0.00	0.01	0.937916
Error	649.98	1195	0.54		

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Table G6.2: Physical and Social Risk Main Effects for Behavioural Intent

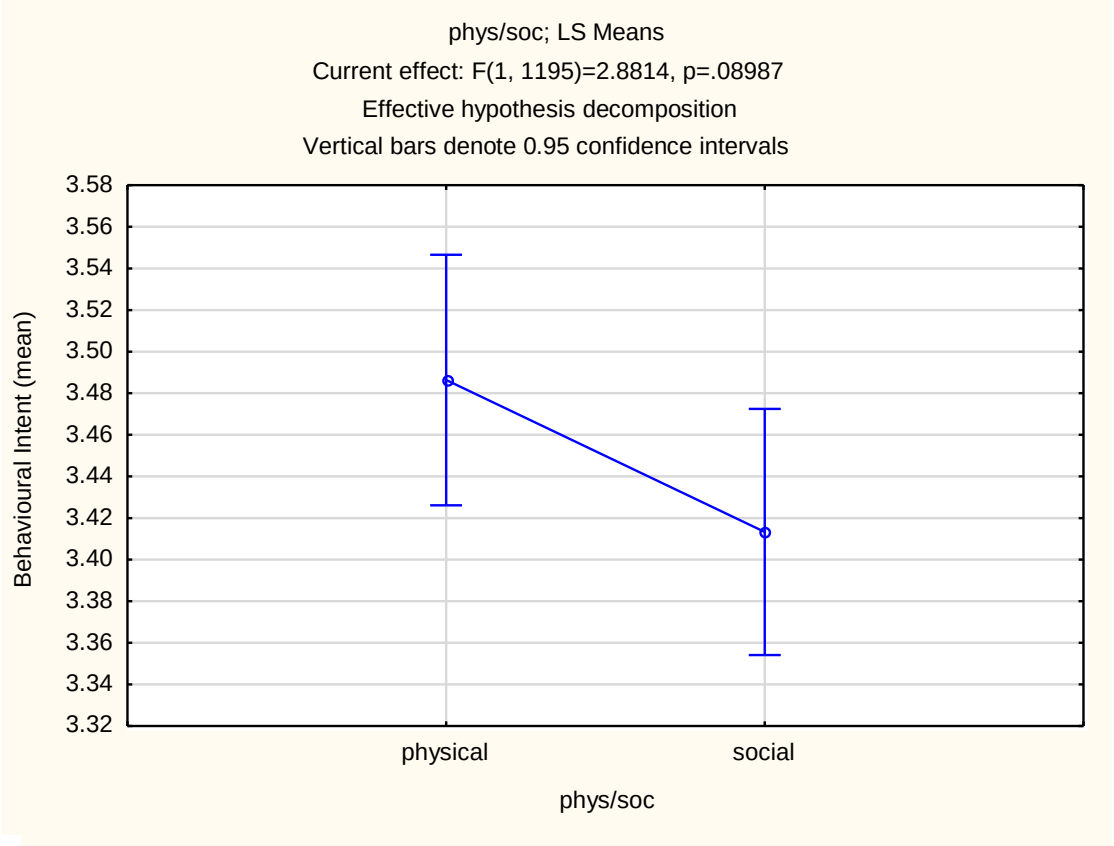

Table G6.3: Two-way Interaction for Behavioural Intent (Question- versus Statement-based Warnings and Gender Differences for Self-efficacy)

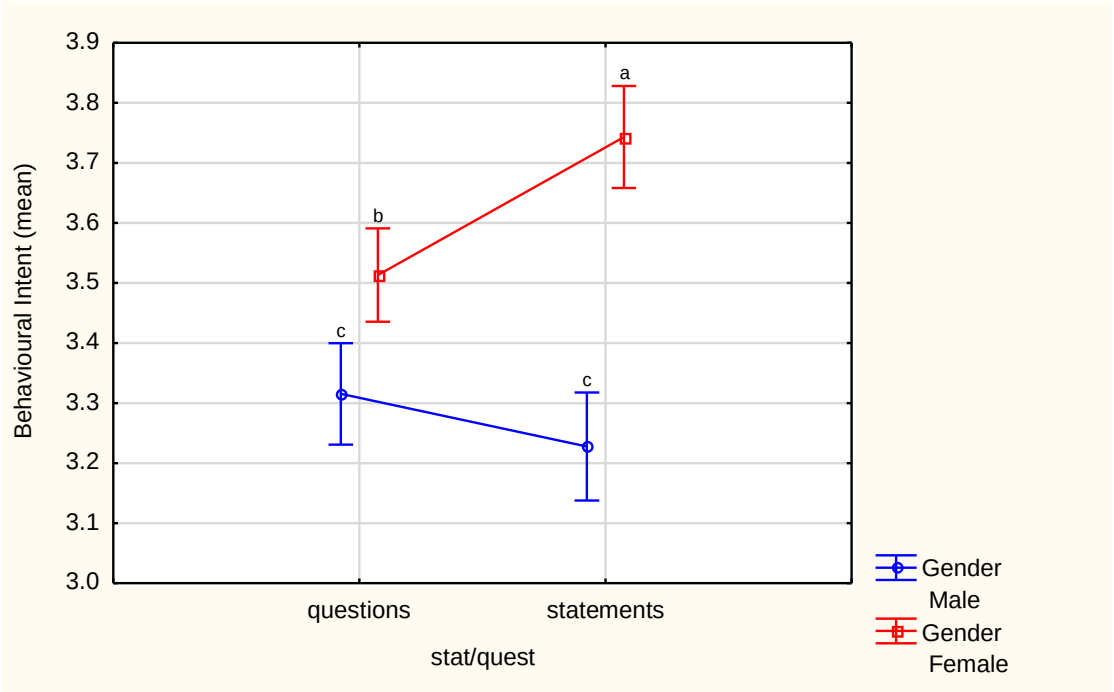

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Table G6.4: LSD Post Hoc Analysis for Two-way Interaction for Behavioural Intent

Cell	LSD test; variable Behavioural Intent Probabilities for Post Hoc Tests Error: Between MSE = .54392, df = 1195.0					
	stat/quest	Gender	{1} 3.3124	{2} 3.5062	{3} 3.2280	{4} 3.7441
1	questions	Male		0.000926	0.178737	0.000000
2	questions	Female	0.000926		0.000004	0.000045
3	statements	Male	0.178737	0.000004		0.000000
4	statements	Female	0.000000	0.000045	0.000000	

Table G6.5: Descriptive Statistics for Behavioural Intent

Effect	Descriptive Statistics						
	Level of Factor	Level of Factor	Level of Factor	N	behavioural intent Mean	behavioural intent Std.Dev.	behavioural intent Std.Err
Total				1203	3.457606	0.762402	0.021981
phys/soc	physical			591	3.515510	0.776596	0.031945
phys/soc	social			612	3.401688	0.744809	0.030107
stat/quest	questions			643	3.417574	0.739842	0.029177
stat/quest	statements			560	3.503571	0.785659	0.033200
Gender	Male			555	3.272673	0.743621	0.031565
Gender	Female			648	3.615998	0.742907	0.029184
phys/soc*stat/quest	physical	questions		299	3.492196	0.745940	0.043139
phys/soc*stat/quest	physical	statements		292	3.539384	0.807367	0.047248
phys/soc*stat/quest	social	questions		344	3.352713	0.729395	0.039326
phys/soc*stat/quest	social	statements		268	3.464552	0.760888	0.046479
phys/soc*Gender	physical	Male		257	3.308690	0.787157	0.049102
phys/soc*Gender	physical	Female		334	3.674651	0.730618	0.039978
phys/soc*Gender	social	Male		298	3.241611	0.703775	0.040769
phys/soc*Gender	social	Female		314	3.553609	0.751906	0.042433
stat/quest*Gender	questions	Male		294	3.312358	0.743340	0.043352
stat/quest*Gender	questions	Female		349	3.506208	0.726182	0.038872
stat/quest*Gender	statements	Male		261	3.227969	0.742821	0.045979
stat/quest*Gender	statements	Female		299	3.744147	0.742875	0.042962
phys/soc*stat/quest*Gender	physical	questions	Male	140	3.378571	0.789328	0.066710
phys/soc*stat/quest*Gender	physical	questions	Female	159	3.592243	0.692700	0.054935
phys/soc*stat/quest*Gender	physical	statements	Male	117	3.225071	0.779686	0.072082
phys/soc*stat/quest*Gender	physical	statements	Female	175	3.749524	0.757650	0.057273
phys/soc*stat/quest*Gender	social	questions	Male	154	3.252165	0.696041	0.056089
phys/soc*stat/quest*Gender	social	questions	Female	190	3.434211	0.747266	0.054212
phys/soc*stat/quest*Gender	social	statements	Male	144	3.230324	0.714213	0.059518
phys/soc*stat/quest*Gender	social	statements	Female	124	3.736559	0.724490	0.065061